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A.I.A. FILE NO. 10-F

APR 23 1958

1958 CATALOG  
GLASS BLOCKS

P

C

ERNEST CORMIER  
ARCHITECTE ET INGENIEUR  
MONTREAL

IN CANADA:

GLASS • PAINT • PITTOO METAL

**CANADIAN CPI PITTSBURGH**  
INDUSTRIES LIMITED

PITTSBURGH CORNING CORPORATION

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PITTSBURGH 22, PENNSYLVANIA

Mirrors

Patterned  
Glass

Insulating  
Glass

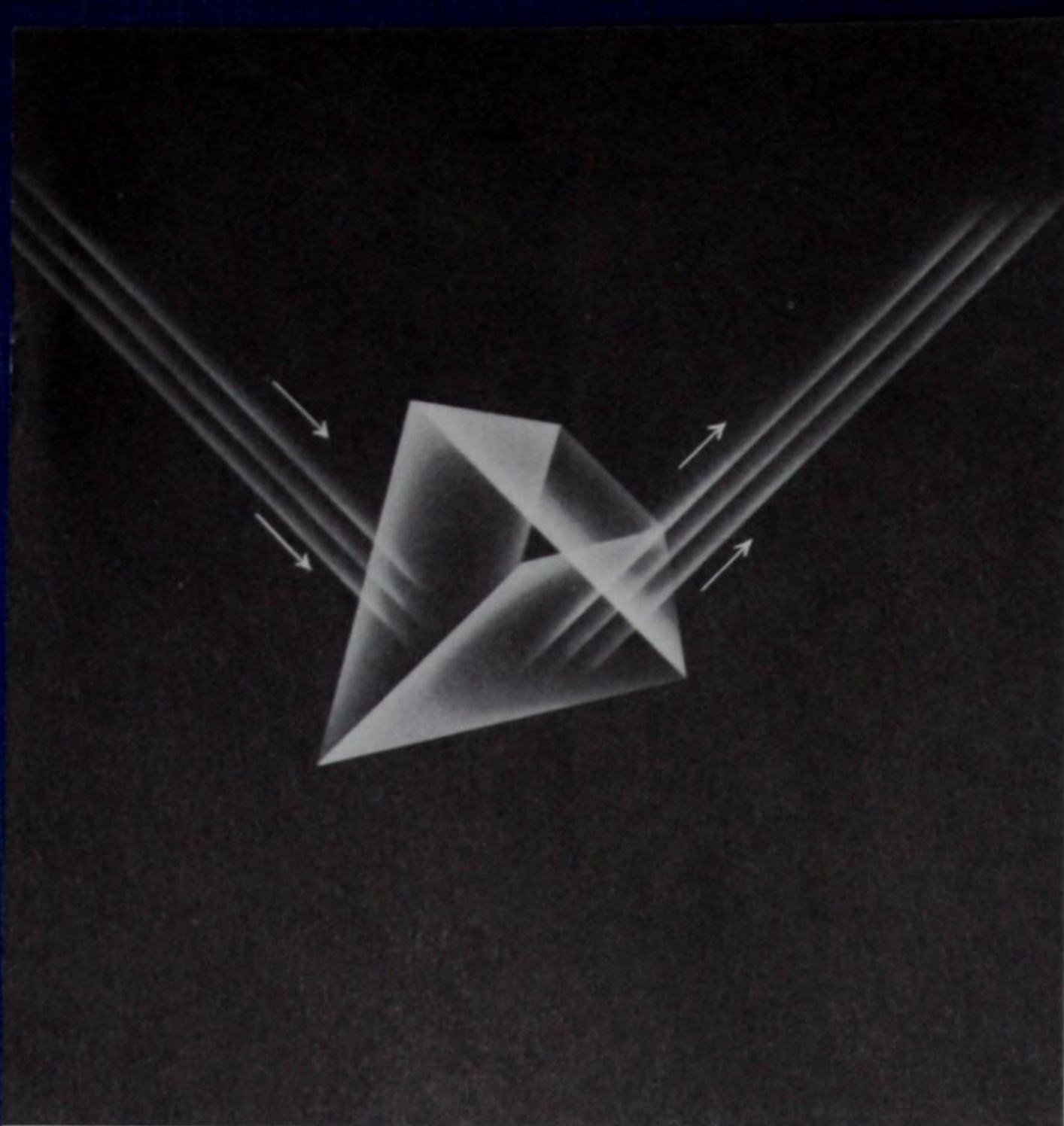
Storefronts

Art Glass

General Glass

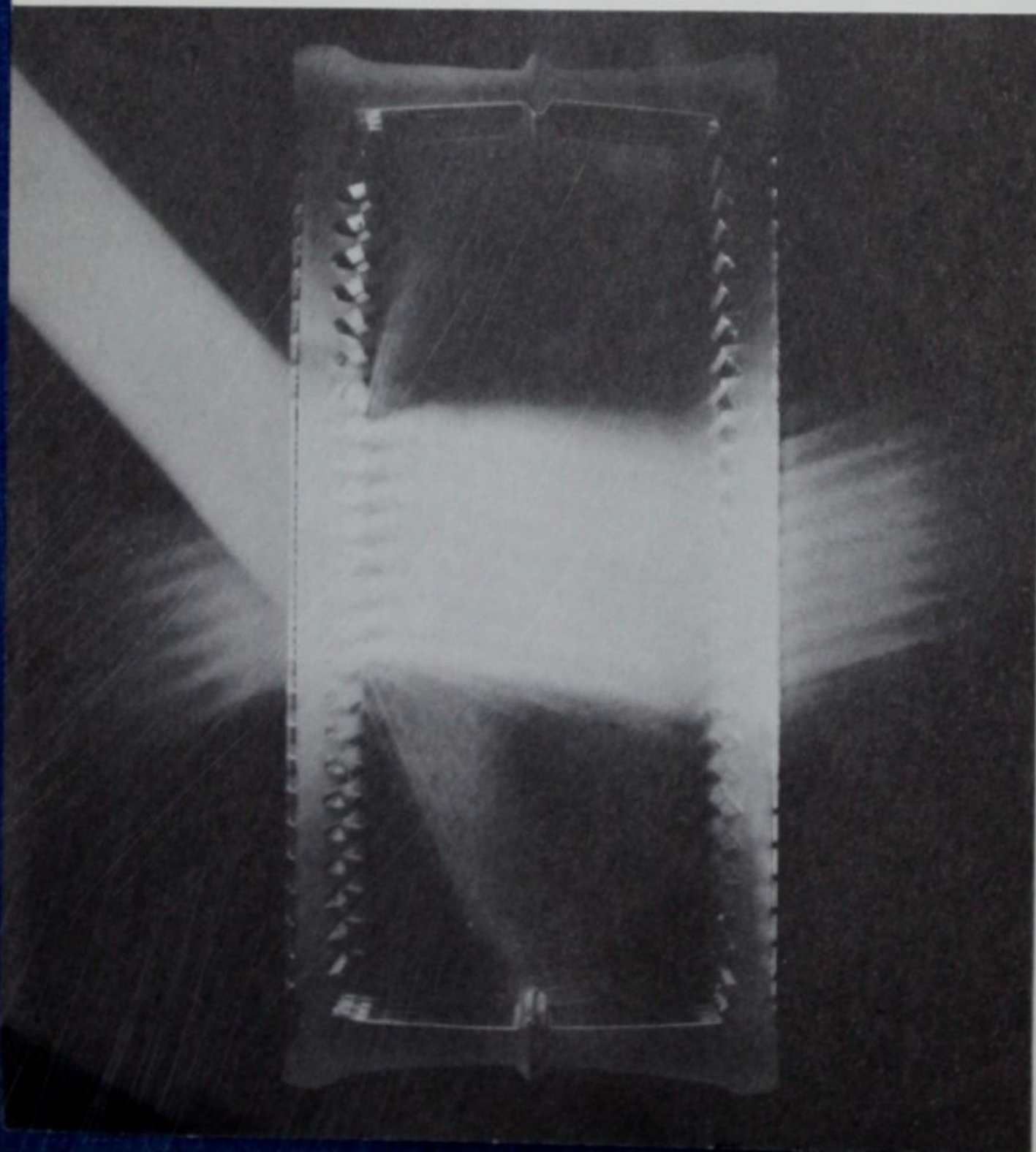
Miscellaneous





PC

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# PC

# PC

A PC Glass Block is made by fusing two sections of clear, pressed glass together at elevated temperatures. The result is a hollow, partially-evacuated all-glass building unit combining most of the desirable properties of glass and masonry in a single product. In addition, PC Glass Blocks provide some important advantages not found in other glass or masonry products. The complete study of this product, contained on the following pages, will be of particular interest to Architects.

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In the curtain wall concept of Architecture for buildings today, certain basic considerations must be answered. If these considerations include Color and Texture, Reasonable Initial Cost and Low Maintenance Expense, Low Surface Condensation and Good Insulation Value, Privacy and Protection, and a Better Use of Daylight, we strongly suggest that you investigate PC Glass Blocks.

We believe that Glass Blocks, including our new line of Color Glass Blocks, offer a solution to many of the basic problems of curtain wall construction. The important advantages of Good Insulation Value and Low Maintenance Expense alone suggest that Glass Blocks can answer a complex problem present in curtain wall construction. But, if you go a step further and compare the quality of controlled daylight that glass blocks offer, to the flood of uncontrolled daylight from other materials, the tremendous advantages of glass blocks become immediately apparent. Still further, you realize that these are advantages not only in terms of design and construction, but also in terms of the "human element"—the people working or living in the building.

There are two basic kinds of PC Glass Blocks: Functional Block and Decorative Block. Functional Blocks take daylight and make it work for the building and its occupants. Available in two sizes, they direct or diffuse the light and help to distribute it throughout the room. Decorative Blocks give six texture types in three sizes, and Color Glass Blocks are available in four standard colors in one size making possible wide variation in Curtain Wall design.

## PC CURTAIN WALLS AND GLASS BLOCKS

# PC

Because of their good thermal insulating value, PC Glass Blocks also help reduce heating and cooling costs and answer the problem of surface condensation. This very important fact, plus the extremely low maintenance cost of glass blocks helps to make them one of the really desirable materials for Curtain Walls. In curtain wall construction today, a point has been reached where "Privacy" is again desired. With some patterns of glass block, this desire can be achieved in part of a Curtain Wall while the "Continuity of the Skin" remains undisturbed.

Two other considerations should be mentioned. One is the "security aspect" of glass block panels. Physically speaking, they have sufficient strength to deter anyone against entry. Psychologically speaking, they have the ability to help people feel secure when working near the outside edge of a building. In multi-storied structures this is a frequent problem. The other consideration is the all-important one of cost. Compared to other curtain wall materials glass blocks offer greater advantages, often at less cost—both initially and over the life of the installation. With the framework up, a Glass Block Curtain Wall can be installed, finished inside and out, by one trade in one operation.

We feel that Pittsburgh Corning Glass Blocks offer the kind of aesthetic and functional advantages that make them one of the most desirable and economical materials to use in Curtain Wall Construction. When the product is properly designed into a structure, the result can be a creative design solution as well as a practical, functioning part of Architecture.



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## COLOR GLASS BLOCKS BY PITTSBURGH CORNING

With the introduction of Color to Glass Blocks, we at Pittsburgh Corning feel that we now offer a complete choice of glass blocks for any Curtain Wall structure. Now, the Architect can not only choose functional block to direct sunlight, or to diffuse daylight (or use non-functional, decorative block where the emphasis is on texture), but he can achieve the multi-floor patterns of his design with color and still retain the "Continuity of the Skin." With Color Glass Blocks it is now possible to control and modulate the transparency of the curtain wall with the use of ONE material, and still be able to employ more than one color when desired.

Color is applied to PC Color Glass Blocks by spraying an inorganic, ceramic-enamel "frit" onto the block face and firing it onto the block at high temperatures. This results in a glossy, scratch- and abrasion-resistant finish which exhibits the same thermal expansion characteristics as the basic glass.

The choice of expression offered to the Architect

**COLOR GLASS BLOCKS BY  
PITTSBURGH CORNING**

**PC**

in glass block curtain wall construction extends from completely transparent, water-clear glass, to completely translucent glass; from a functional block to a decorative block, and into colored glass blocks that are available in the standard colors of coral, yellow, green and blue. Other colors of the spectrum ranging from white to black can be produced on special order when a sufficient quantity is involved. Thus, the design opportunities for the Architect are unlimited. New uses of color in building immediately become apparent. Creative use of Color Glass Block can enrich the design of contemporary churches and contribute a quiet, religious feeling. On the other hand it can express the gaiety of a cabana club, or define the many floors of offices of a skyscraper. Color Glass Block gives the Creative Architect a new material to use and helps him translate his designs into reality.

More detailed information on PC Color Glass Blocks is available on request. Ask your PC Architectural Representative or contact our office nearest you (see Page 31).



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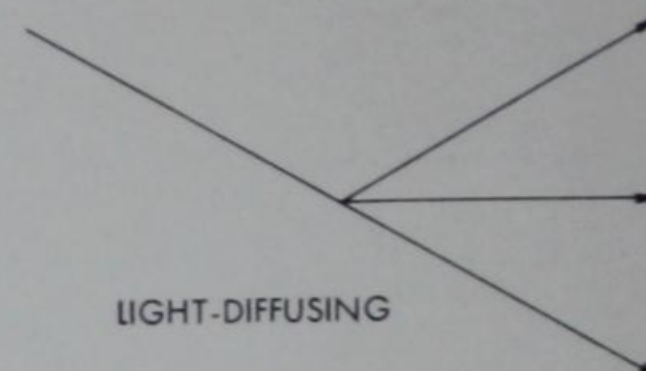
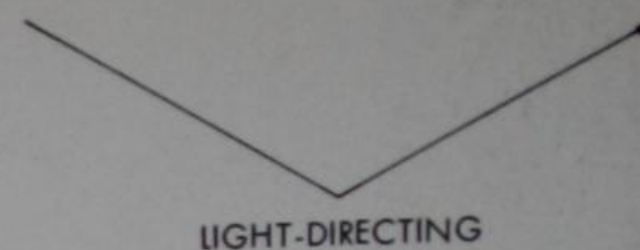
PC

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PC Functional Glass Blocks contain built-in prisms and corrugations and, in some blocks, an internal fibrous glass filter that alter the path of transmitted light. One type bends the incoming light rays upward onto the ceiling plane. This is termed a *light-directing* block and generally should be used above eye-level. Another type diffuses the transmitted light in all directions. This is known as a *light-diffusing* block and can be used either above or below eye-level. Both light-diffusing and light-directing blocks spread the transmitted daylight horizontally into the far corners of the room. A choice of three degrees of control is available in both the light-directing and the light-diffusing types. Thus the Architect can select a block suited to his particular design problem.

The orientation of a building elevation is one of the factors determining the selection of Functional Block to be used. For example: on the East, South, or West elevations of a building, glass blocks are used that reduce the light to a usable value and at the same time provide better protection against glare and insulation against radiant heat from the sun. On Northern elevations where there is no direct sunlight, glass blocks are used that primarily transmit light. Another factor affecting choice



# PC

## CHARACTERISTICS OF FUNCTIONAL GLASS BLOCKS

# PC

of the proper block is the ceiling of the room or area inside the panel. Light-directing blocks are fully effective only with light-colored, high-reflectance ceilings. Where ceilings are dark or cluttered, light-diffusing blocks should be used above eye-level as well as below.

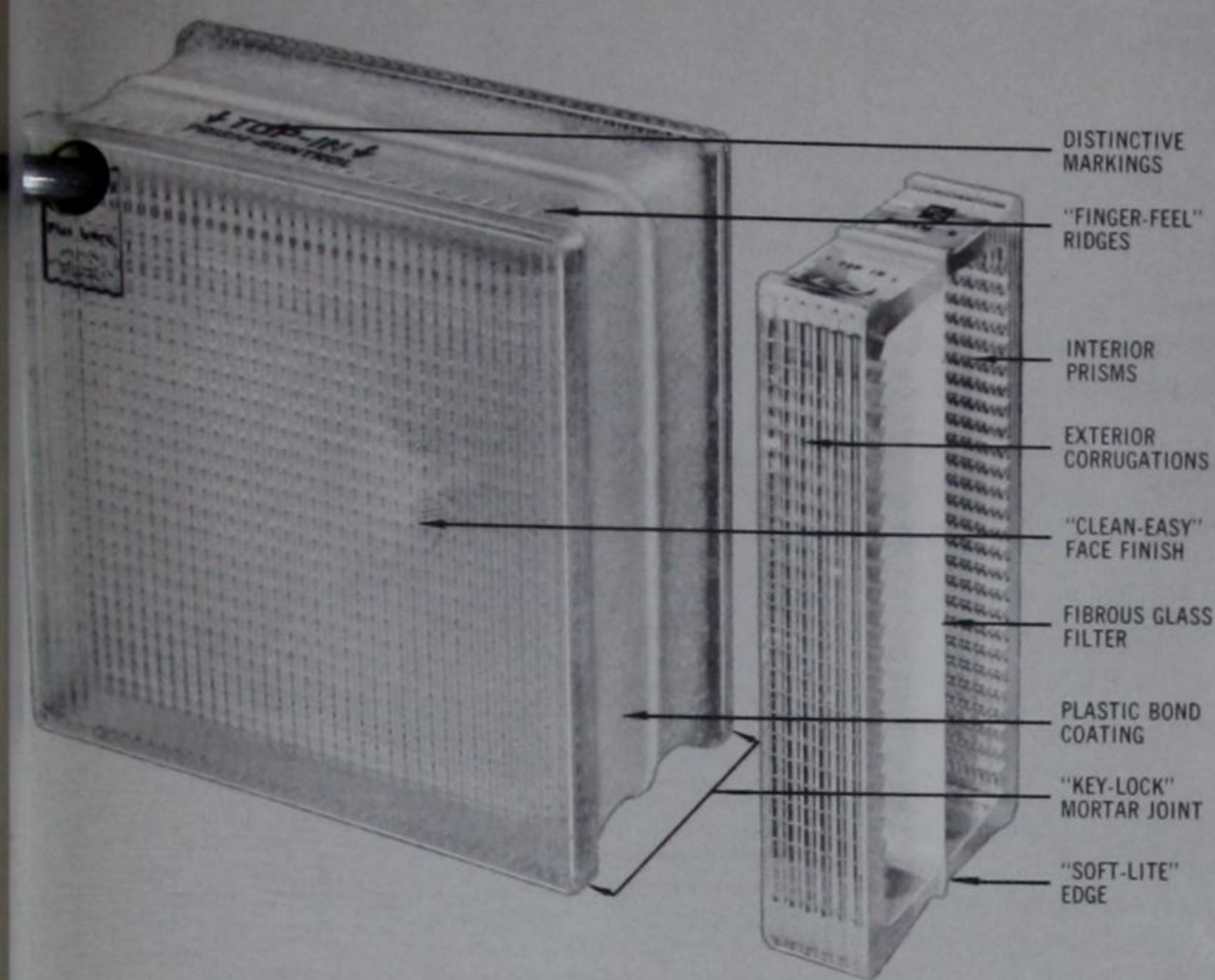
To answer the need for *maximum* control under extreme sun conditions, PC **Suntrol** Blocks are recommended. They contain a pale green fibrous glass filter that reduces brightness by 35% and instantaneous heat gain by 25%. This filter, dividing the interior into two compartments, is an integral part of the block (see cutaway view, Page 9).

Where a *medium* degree of brightness and solar heat control is desired, PC **"LX"** Functional Blocks are recommended. They contain a white fibrous glass filter which, like the green filter in Suntrol blocks, is an integral part of the product and divides the interior into two dead-air spaces, providing greater insulation value.

For conditions where only a *normal* degree of control is necessary, regular functional blocks containing no filter (and without "Suntrol" or "LX" designation) are recommended.

"Suntrol" is a registered trademark of Pittsburgh Corning Corporation.





# PC

# PC

## FUNCTIONAL BLOCK FEATURES

Soft-Lite® edges are an obscure opal glass insert at the edge seal where the two halves of the block are joined (see cutaway photo above). Soft-Lite edges are provided on all PC Functional Blocks designed for sun exposures. They reduce brightness of blocks at the edges so that a panel of blocks has a uniform appearance. The Bristol non-sun exposure block does not have this edge and consequently, is not recommended where direct sun rays will hit the panel.

Every PC Functional Block is stamped with distinctive markings to show block identification and proper positioning in the panel. Careful attention to proper mounting position is important, both from a performance and appearance view point. In addition, special "Finger-Feel" ridges are cast into the top mortar edge of most blocks to further assist the mason.

Other features include a "Key-Lock" mortar joint and plastic bond coating for water-tight construction, and a "Clean-Easy" face finish for easier clean-up on the job.

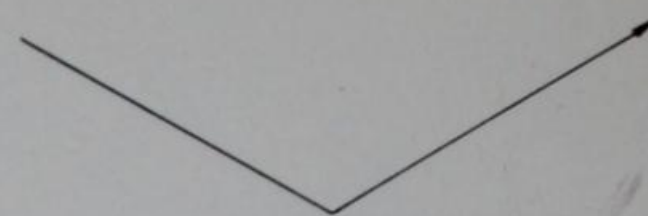
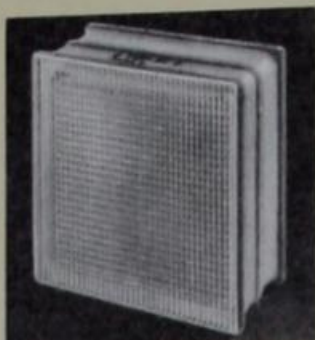


## LIGHT-DIRECTING BLOCKS (used above eye-level only)

**PRISM B** is a light-directing functional glass block containing interior prisms that throw the light upward onto the ceiling plane, and exterior corrugations which collect light on the outside and spread it horizontally on the inside. It is recommended for use on either sun or non-sun exposures wherever a light-directing block is suitable. Its use on sun exposures is recommended where a maximum of light transmission is desired and where minimum control of brightness and solar heat is acceptable. **PRISM B** (without LX Filter) is available only in an 8-inch square.

**PRISM B LX** is a light-directing functional glass block of the same design as **PRISM B**, but with the addition of a white fibrous glass filter which helps reduce glare and solar heat gain. It is recommended for use on sun exposures wherever a light-directing block is suitable, and where medium light transmission and control of brightness and solar heat are acceptable. **PRISM B LX** is available in 8-inch and 12-inch squares.

**PRISM SUNTROL** is a light-directing functional glass block of the same design as **PRISM B** but with the addition of a pale green fibrous glass filter. This filter, more dense than the **PRISM B LX** filter, reduces glare and solar heat gain to a greater degree. It is recommended for use on sun exposures wherever a light-directing block is suitable, and where minimum light transmission is acceptable and maximum control of brightness and solar heat is desired. **PRISM SUNTROL** is available in 8-inch and 12-inch squares.



# PC

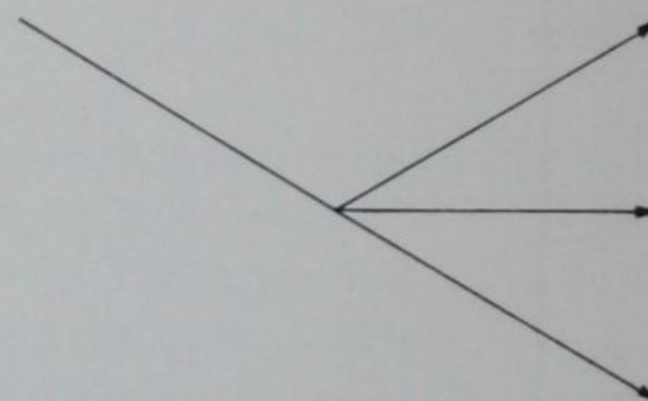
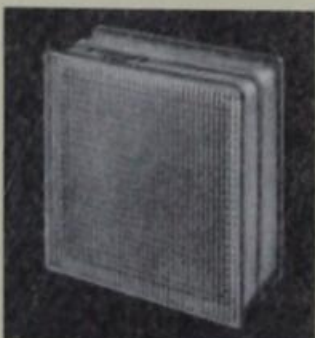
## FUNCTIONAL BLOCKS TWO TYPES OF CONTROL

## LIGHT-DIFFUSING BLOCKS (used above or below eye-level)

**ESSEX** is a light-diffusing functional glass block containing interior and exterior corrugations that temper the raw sunlight and diffuse it in all directions. It is recommended for use on either sun or non-sun exposures wherever a light-diffusing block is suitable. Its use on sun exposures is recommended where a maximum of light transmission is desired and where minimum control of brightness and solar heat is acceptable. **ESSEX** (without LX filter) is available only in an 8-inch square.

**ESSEX LX** is a light-diffusing functional glass block of the same design as **ESSEX** but with the addition of a white fibrous glass filter which helps reduce glare and solar heat gain. It is recommended for use on sun exposures wherever a light-diffusing block is suitable, and where medium light transmission and control of brightness and solar heat are acceptable. **ESSEX LX** is available in 8-inch and 12-inch squares.

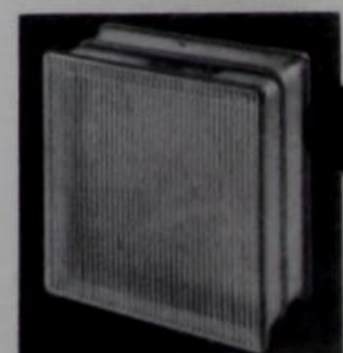
**ESSEX SUNTROL** is a light-diffusing functional glass block of the same design as **ESSEX** but with the addition of a pale green fibrous glass filter. This filter, more dense than the **ESSEX LX** filter, reduces glare and solar heat to a greater degree. It is recommended for use on sun exposures wherever a light-diffusing block is suitable, and when minimum light transmission is acceptable and maximum control of brightness and solar heat is desired. **ESSEX SUNTROL** is available in 8-inch and 12-inch squares.



## GENERAL PURPOSE BLOCKS BRISTOL and BRISTOL LX (For non-sun elevations) (For sun elevations)

When it is not practical to combine the various functional blocks outlined at the left and above, we suggest the use of **BRISTOL** or **BRISTOL LX** throughout the entire building. These blocks are frequently used on sash replacement jobs when fenestration openings do not permit ideal block selection. **BRISTOL** and **BRISTOL LX**, since they are light-diffusing blocks, are excellent for use where dark or high, cluttered ceilings will not reflect enough light from light-directing blocks.

The **BRISTOL LX** is also widely used where maximum insulation is required. This block is of the same design as **BRISTOL** except that its interior is divided into two cavities by a white fibrous glass filter. This reduces heat loss as well as heat gain from the sun. Both **BRISTOL** and **BRISTOL LX** are available only in an 8-inch square.





## LIGHT-DIRECTING BLOCKS (used above eye-level only)

Exposure of Panel	Performance Desired		Block Recommended	Sizes Available	
	Light Transmission	Brightness and Solar Heat Control		8''	12''
Sun	Maximum	Minimum	Prism B	■	
	Medium	Medium	Prism B LX	■	■
	Minimum	Maximum	Prism Suntrol	■	■
Non-Sun	Maximum	Minimum	Prism B*	■	

\*LX and Suntrol Blocks may be used on non-sun exposures with corresponding reduction in light transmission and increase in control of brightness and heat gain.

NOTE: Do not use light-directing blocks BELOW eye-level because they will throw light up into your eyes. EYE-LEVEL is considered to be 6 feet above the finish floor.

## FUNCTIONAL BLOCK SELECTION TABLES

## LIGHT-DIFFUSING BLOCKS (used above or below eye-level)

Exposure of Panel	Performance Desired		Block Recommended	Sizes Available	
	Light Transmission	Brightness and Solar Heat Control		8''	12''
Sun	Maximum	Minimum	Essex	■	
	Medium	Medium	Essex LX	■	■
	Minimum	Maximum	Essex Suntrol	■	■
Non-Sun	Maximum	Minimum	Essex*	■	

\*LX and Suntrol Blocks may be used on non-sun exposures with corresponding reduction in light transmission and increase in control of brightness and heat gain.

# PC

Actual block dimensions:

8 inch size— $7\frac{3}{4}$ " x  $7\frac{3}{4}$ "

12 inch size— $11\frac{3}{4}$ " x  $11\frac{3}{4}$ "

All blocks are  $\frac{3}{8}$ " thick.

Mirrors

Patterned Glass

Insulating Glass

Storefronts

Art Glass

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## INSTANTANEOUS HEAT GAIN IN BTU./HR./SQ. FT.

GLASS BLOCK TYPES* AND PATTERNS	EXPOSURE OF PANEL	SUN TIME											
		8 am	9 am	10 am	11 <sup>o</sup> am	12 pm	1 pm	2 pm	3 pm	4 pm	5 pm	6 pm	
		DRY BULB TEMPERATURE (OUTDOOR) °F.											
		77	80	83	87	90	93	94	95	94	93	91	
TYPE I† ARGUS ARGUS PARALLEL FLUTES DECORA VUE	N	7	7	10	12	14	16	17	18	18	17	20	
	E	118	94	67	44	24	22	23	23	21	19	51	
	SE	70	76	69	56	41	23	18	18	17	16	13	
	S	8	17	29	39	42	46	42	33	23	19	15	
	SW	6	8	10	14	24	49	74	93	94	81	54	
	W	6	9	11	14	16	27	59	102	136	142	104	
TYPE II  BRISTOL	N	7	7	10	12	14	16	17	18	18	17	20	
	E	109	85	66	43	24	22	23	23	21	19	15	
	SE	65	71	67	55	41	23	18	13	17	16	13	
	S	8	16	28	39	42	46	41	32	23	19	15	
	SW	6	8	10	14	24	48	72	88	89	77	52	
	W	6	9	11	14	16	26	58	96	127	134	97	

Solar, or radiant, heat gain through a fenestration can normally be considered for two circumstances. In air-conditioned buildings, both the rate of heat flow through the fenestration and the reradiation characteristics are important. These properties, for unshaded panels of 8" glass blocks, are shown in the accompanying table of instantaneous heat gain, which expresses a rate of heat flow, not total heat gain, for summer conditions. The rate of heat flow, both radiant and conducted, through glass block panels is only 30%—75%, depending on pattern, of that through conventional glazing media. Because glass block panels have a relatively high mass, some of this heat flow is absorbed and reradiated diffusely. These factors should be taken into account in the design and sizing of the air-conditioning system. In ventilated, but uncooled buildings, the summer time room temperatures in equivalent spaces fenestrated with either glass block or conventional materials will be quite similar, but there will be a lag in the temperature changes in the glass block fenestrated area. Under these conditions, the reradiation characteristics of glass block panels may cause the sensation of higher heat flow, and should be taken into account in the design and orientation of the glass block panels, and the type and method of ventilation. More complete information on the heat flow characteristics of glass blocks may be found in the current A. S. H. & A. E. Guide.

# PHYSICAL PERFORMANCE DATA

# PC

TYPE III  BRISTOL LX	N	6	6	8	10	12	14	15	17	17	16	19	
	E	93	73	58	40	22	20	21	22	20	18	14	
	SE	54	62	60	52	38	21	17	17	17	15	12	
	S	7	14	24	35	40	42	37	30	22	18	14	
	SW	5	7	9	12	20	45	65	79	78	68	49	
	W	5	8	9	12	14	23	50	81	100	114	90	
TYPE IV A  ESSEX	N	5	5	7	9	11	13	14	16	16	15	18	
	E	80	73	63	40	21	19	20	21	19	17	14	
	SE	44	60	66	57	41	20	16	16	15	14	12	
	S	6	12	23	38	45	45	36	28	21	17	14	
	SW	4	6	8	11	18	50	71	77	68	58	42	
	W	4	7	8	11	13	23	55	81	87	94	69	
TYPE V  PRISM B	N	5	5	8	10	12	14	15	16	16	15	18	
	E	98	88	69	41	22	20	21	21	19	17	14	
	SE	47	71	71	58	39	20	16	16	15	14	12	
	S	6	13	28	40	45	47	41	29	21	17	14	
	SW	4	6	8	11	19	51	76	88	71	58	42	
	W	4	7	9	12	14	24	60	96	105	94	69	

\*Types designated by and data taken from A. S. H. & A. E. See Chapter 13, tables 19 to 23 "Heating, Ventilating, Air Conditioning Guide," 1957 for complete information.

†For descriptions of PC Decorative Blocks, see page 18.

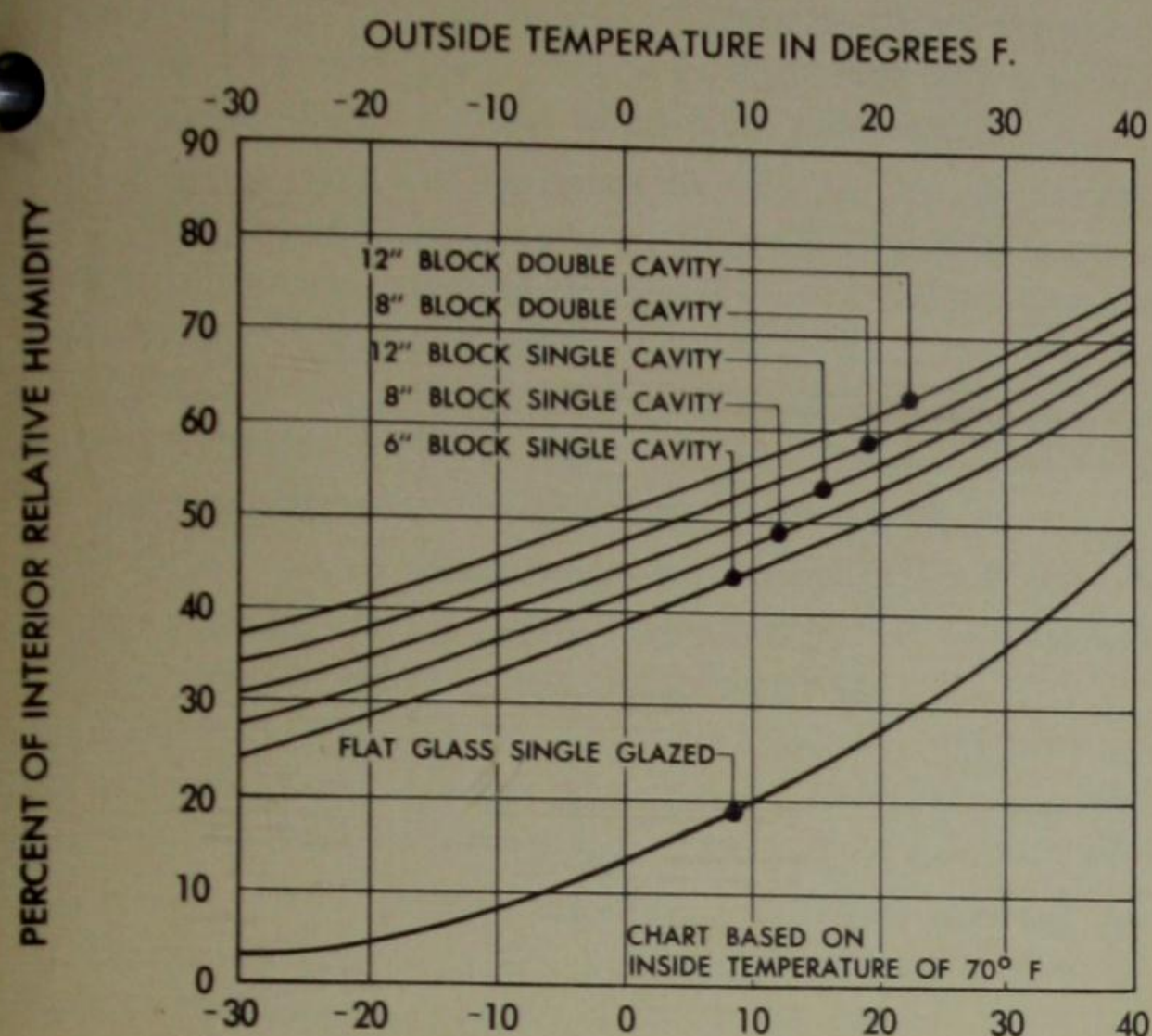
Table assumes clear atmosphere, 75°F. indoor temperature, 18° declination north (for August 1), 40° north latitude.

For industrial atmospheres, reduce total heat gain 20% on east and west elevations, 5% on south elevations.

For each degree that design room temperature exceeds 75°F., subtract 0.5 from values shown. For each degree that outdoor dry bulb temperature exceeds 95°F., add 0.5 to values shown.



## GLASS BLOCK SURFACE CONDENSATION CHART



HOW TO USE THE CHART: To solve a typical problem, chart shows that with an inside temperature of 70°F. and relative humidity of 40%, it takes an outside temperature of 23° below zero to cause condensation on a panel of 12-inch double cavity LX blocks such as the Essex LX. Under the same conditions, condensation will form on a single-glazed flat glass window at 33° above zero.

# PC

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**THERMAL INSULATION VALUES** . . . the high insulation value of PC Glass Blocks is the result of two factors: first, the partial vacuum in each hermetically sealed block, and second, the fibrous glass filter in the LX and Suntrol Glass Blocks that creates two dead air spaces.

"U" VALUES (COEFFICIENT OF HEAT TRANSMISSION)

Glass Block Size and Type	"U" (Btu./hr./sq.ft./°F.)
6" square—single cavity	0.60
8" square—single cavity	0.56
8" square—double cavity	0.48
12" square—single cavity	0.52
12" square—double cavity	0.44

**SOUND REDUCTION** . . . the average sound reduction factor for PC Glass Blocks is 40.7 decibels, which is equal to the difference in noise level between an average factory and a quiet home.

**WEATHER RESISTANCE** . . . PC Glass Block panels show no sign of deterioration under severe weather cycle tests, which consist of heating, water spraying and freezing the glass surface with temperatures varying from 155°F. to -40°F.

**WIND LOAD RESISTANCE** . . . within recommended area limits (see Pages 20-25) PC Glass Block panels will withstand a wind load of 20 pounds per square foot with a safety factor of 2.7. Twenty pounds per square foot is equivalent, approximately, to a 75 m.p.h. wind; 54 pounds per square foot to a 130 m.p.h. wind.

**STRUCTURAL STRENGTH** . . . 400 to 600 pounds per square inch when uniformly loaded is the compressive strength of a PC Glass Block panel. While this is higher than many masonry constructions, never use glass blocks for load bearing walls.



DAYLIGHT ILLUMINATION*						
Sun Exposure						
FENESTRATION TYPE	FEET FROM FENESTRATION					
	5	10	15	20	25	30
GLASS BLOCK PANELS						
8" PRISM B	58	43	31	22	16	13
8" PRISM B LX	41	30	22	14	10	8
12" PRISM B LX	43	32	23	14	10	8
8" PRISM SUNTROL	27	20	14	9	7	5
12" PRISM SUNTROL	28	21	15	9	7	5
8" ESSEX	49	35	25	17	12	10
8" ESSEX LX	35	25	18	11	9	7
12" ESSEX LX	41	30	21	14	10	8
8" ESSEX SUNTROL	23	16	12	7	6	5
12" ESSEX SUNTROL	27	20	14	9	7	5
8" BRISTOL LX	30	22	16	11	9	8
GLASS BLOCK CLERESTORY PANELS† (Minimum Sill Height 9')						
8" PRISM B	55	45	30	22	13	8
12" PRISM B LX	41	30	18	13	8	6
SHADED VISION WINDOWS† SASH AND SHADES	13	8	5	4	3	2

# PC

## TYPICAL DAYLIGHTING PERFORMANCE DATA

# PC

Non-Sun Exposure						
FENESTRATION TYPE	FEET FROM FENESTRATION					
	5	10	15	20	25	30
GLASS BLOCK PANELS						
8" PRISM B	35	25	18	12	10	8
8" PRISM B LX	25	18	13	8	7	6
12" PRISM B LX	35	25	18	12	10	8
8" PRISM SUNTROL	16	11	8	5	4	3
12" PRISM SUNTROL	23	17	12	8	7	5
8" ESSEX	32	22	15	10	8	5
8" ESSEX LX	22	14	10	8	6	4
12" ESSEX LX	29	20	14	9	7	4
8" ESSEX SUNTROL	14	9	7	5	4	3
12" ESSEX SUNTROL	19	13	9	6	5	3
8" BRISTOL	35	24	16	10	7	4
8" BRISTOL LX	22	16	11	7	5	3
GLASS BLOCK CLERESTORY PANELS† (Minimum Sill Height 9')						
8" PRISM B	38	26	16	14	9	7
SHADED VISION WINDOWS† SASH AND SHADES	12	9	6	5	4	3

\*Daylight illumination on the work plane in footcandles for each 1000 footcandles on exterior plane of fenestration.  
†All data assumes each fenestration area equal to 25% of floor area. (Large panel + Clerestory + Vision Window Area = 75%). Reduce in proportion for smaller areas.



Skytrol Blocks are 12-inch square Functional Glass Blocks designed for use in skylights.

Ordinary skylights present several practical problems. They are: poor quality of light, high maintenance costs, high heat loss and condensation. Skytrol answers all of these problems.

Illumination is the most important Skytrol feature. A 5-block wide Skytrol panel, for example, gives 22 footcandles on a desk top 7 feet from the panel centerline, even on an average overcast day (1000 footcandles on panel).

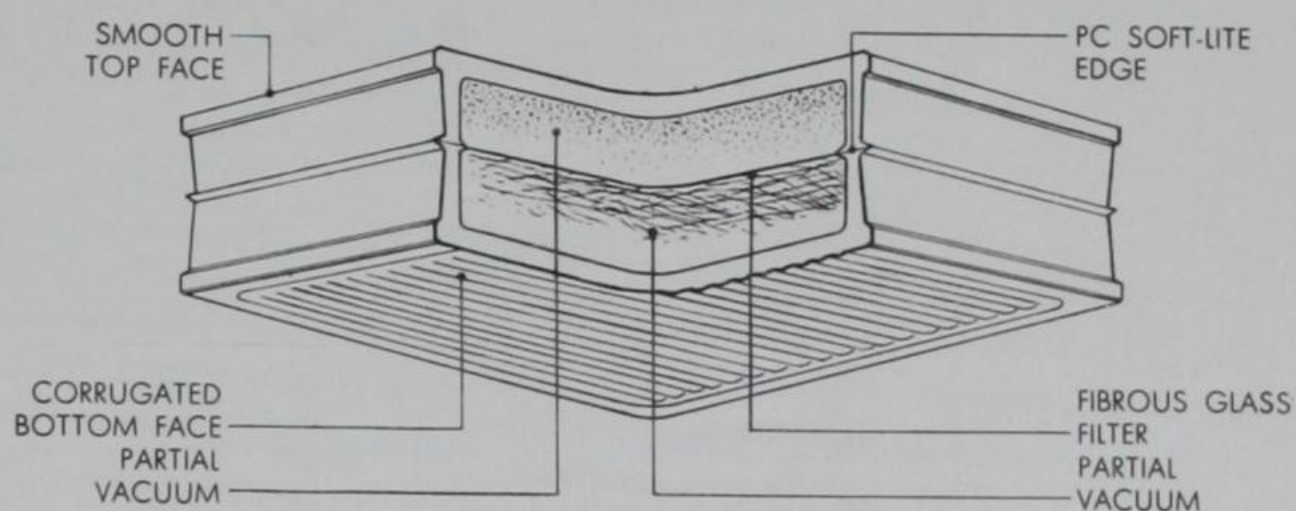
Skytrol blocks have over twice the insulating value of an ordinary skylight and therefore hold down heating costs. The "U" value of Skytrol is 0.44; for flat glass it is 1.13.

Only under extreme temperature and humidity conditions will condensation form on a Skytrol panel (see curve for 12" block—double cavity on condensation chart, Page 13).

For unusually bright locations, Skytrol is available with the pale green Suntrol diffusing filter. This filter not only reduces brightness by 35%, but also reduces instantaneous heat gain by 25%.

For complete information, including installation methods for Skytrol Blocks, ask your PC Architectural Representative for Booklet GB-105 or contact our office nearest you (see Page 31).

## SKYTROL® BLOCK FEATURES



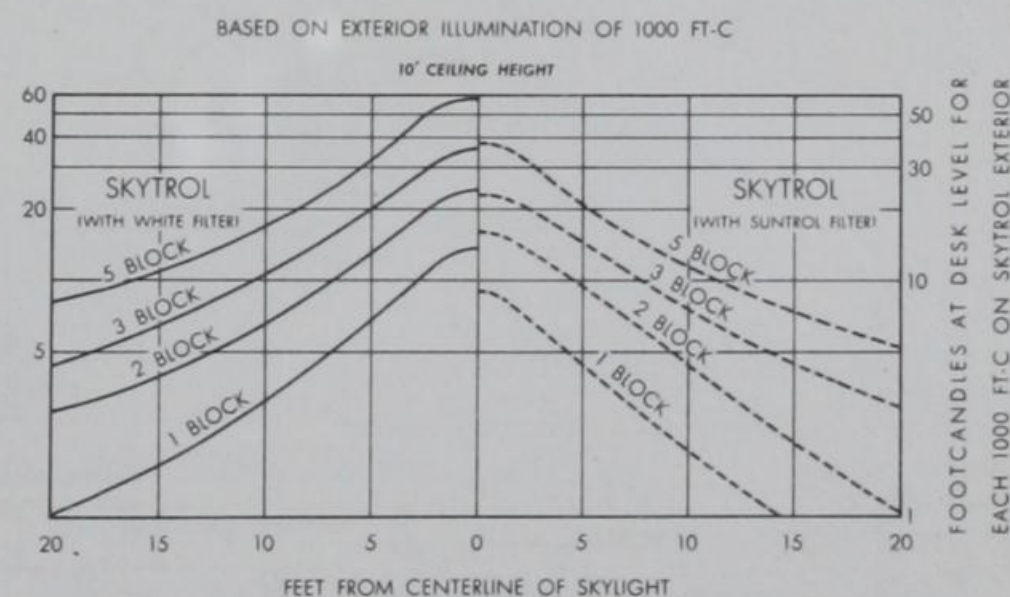
BLOCK DIMENSIONS: 3 $\frac{3}{8}$ " THICK X 11 $\frac{3}{4}$ " X 11 $\frac{3}{4}$ "

# PC

## SKYTROL BLOCKS FOR TOPLIGHTING

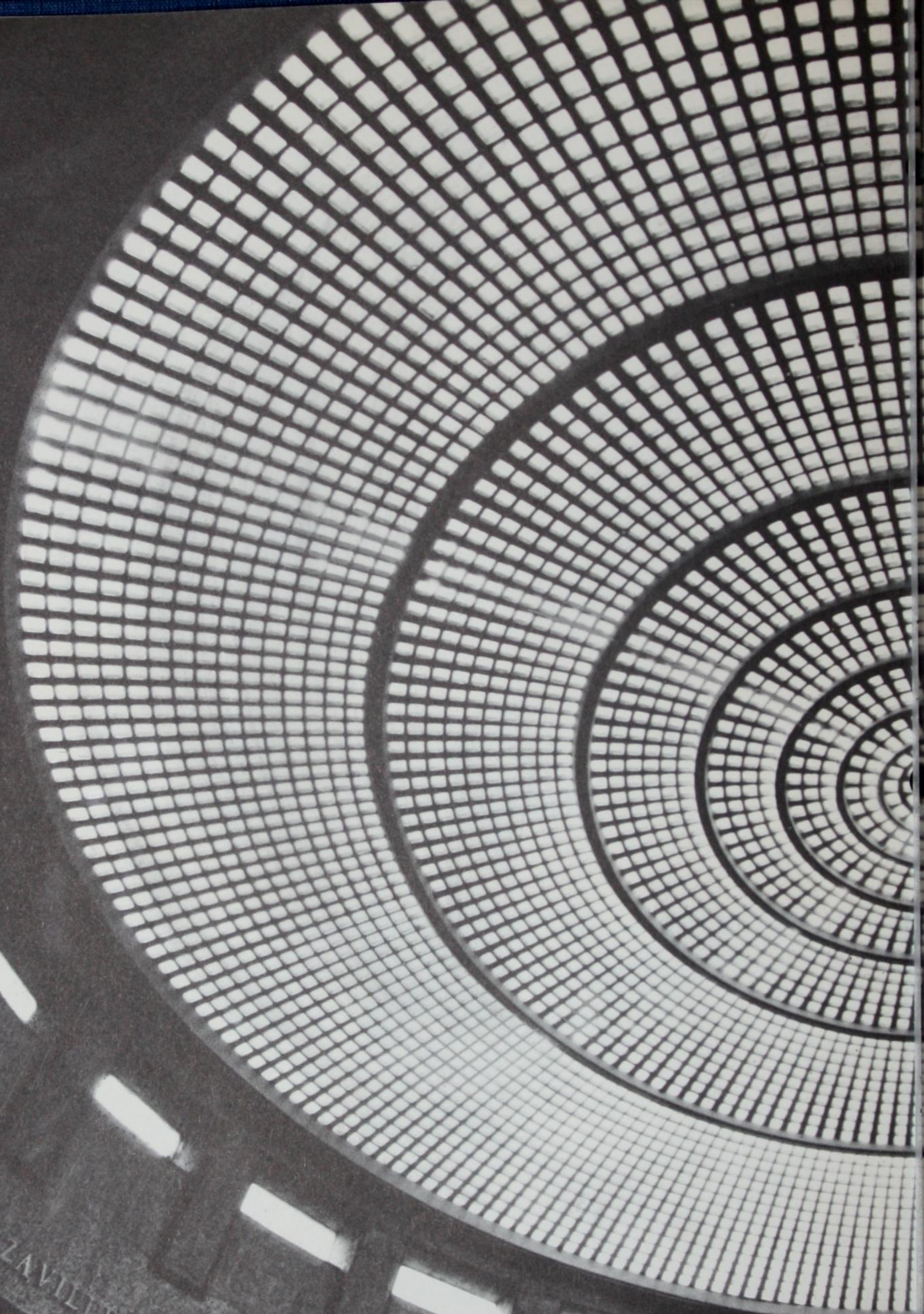
# PC

### LIGHT DISTRIBUTION FROM SKYTROL PANELS



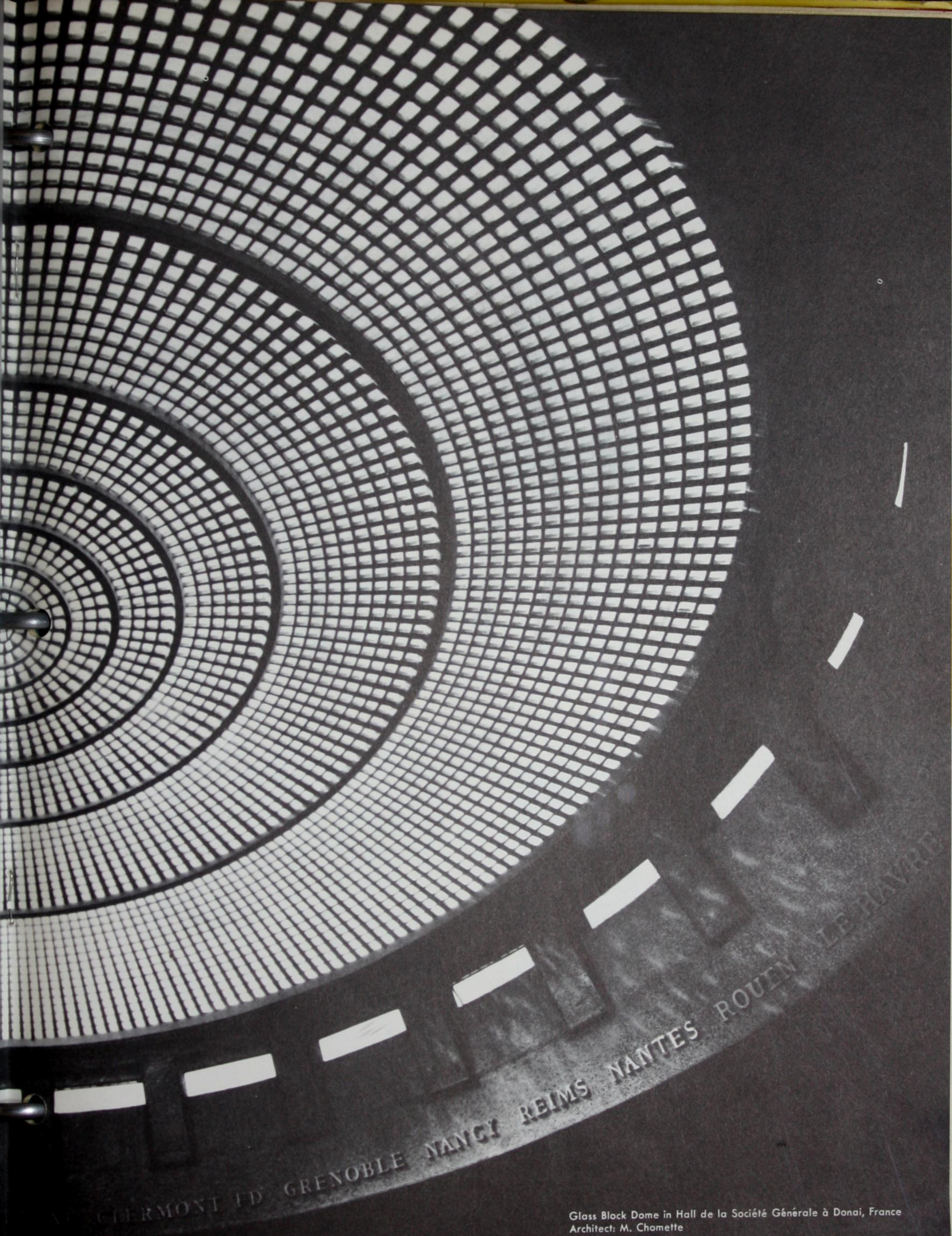
This is a Skytrol test room at the PC Daylighting Research Center. Photocells are used to take simultaneous readings in all parts of the room. Notice the magnificent quality of the light.





CAUDORT  
BRASSAVILLE DAKAR BORDEAUX MARSEILLE LYON TOULOUSE





Mirrors

Patterned  
Glass

Insulating  
Glass

Storefronts

Art Glass

General Glass

Miscellaneous

Glass Block Dome in Hall de la Société Générale à Donai, France  
Architect: M. Chomette



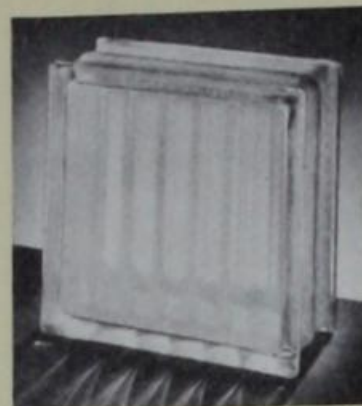
**ARGUS** gives high light transmission and good privacy. The outer faces are smooth and the rounded flutes on the inner faces are at right angles to each other. It can be laid with flutes on one side either horizontal or vertical. Available in 6, 8, and 12-inch squares.



**ARGUS PARALLEL FLUTES** gives high light transmission and fair privacy. It is the same basic block as the ARGUS, except that the flutes on both faces are parallel. This block can be laid with flutes vertical or horizontal. Available in 6, 8, and 12-inch squares.



**ARGUS PARALLEL FLUTES LX** gives uniform brightness, good light transmission and complete privacy. This block is the same as ARGUS PARALLEL FLUTES but has an LX fibrous glass diffusing filter for increased light diffusion and better insulation. Available in 8-inch squares.

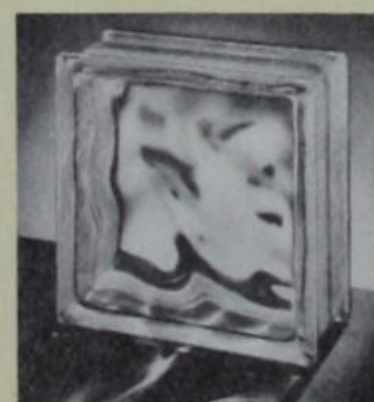


These blocks as the name suggests are intended solely for decorative purposes. They are not recommended where superior daylighting is the important goal. They are intended for installations where the decorative appearance of the panel outweighs its daylighting characteristics. Decorative blocks transmit plenty of light, but they don't control it as well as functional patterns. They are not designed to control daylight.

# PC

## DECORATIVE BLOCKS SIX TEXTURE TYPES

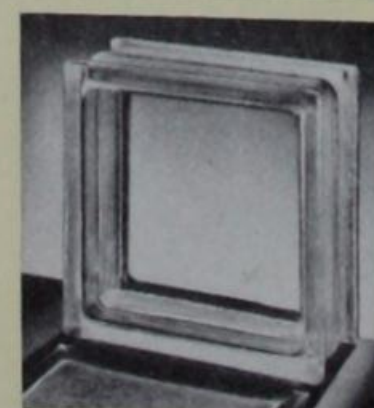
**DECORA** gives high light transmission and can be laid without considering which edge is either side or top. The design is pressed into the inner faces, and the outer faces of the block are smooth. This block is almost transparent and is not recommended for use on sun exposures. Available in 6, 8, and 12-inch squares.



**SAXON** gives good light transmission and is uniformly bright in sunlight. It offers complete privacy. It has shallow, narrow reeds on its outer faces, parallel to wide flutes on the inner faces which are lightly etched. Usually it is installed with the narrow outer reeds vertical to make cleaning easy. Available in 12-inch squares only.



**VUE** gives high light transmission and good visibility through the block. It is frequently used in panels of other patterns to provide a vision area where desired. It can be laid without regard to which edge is side or top. Both the outer and inner faces are smooth and clear. Available in 8 and 12-inch squares.



# PC



## DECORATIVE BLOCKS—PATTERNS AND SIZES

PATTERN NAME	6"	8"	12"
ARGUS	■	■	■
ARGUS PARALLEL FLUTES	■	■	■
ARGUS PARALLEL FLUTES LX		■	
DECORA	■	■	■
SAXON			■
VUE		■	■
Actual block dimensions: 6 inch size— 5 $\frac{3}{4}$ " x 5 $\frac{3}{4}$ " 8 inch size— 7 $\frac{3}{4}$ " x 7 $\frac{3}{4}$ " 12 inch size— 11 $\frac{3}{4}$ " x 11 $\frac{3}{4}$ " All blocks are 3 $\frac{3}{8}$ " thick.			

## MODULAR COORDINATION

All PC Glass Blocks are made in modular coordinated sizes. They can be laid in the standard grid based on a module of 4 inches. Information on Modular Coordination can be obtained from the Modular Building Standards Association, 2029 K Street, N.W., Washington 6, D. C.

# PC GLASS BLOCK LAYOUT TABLE

# PC

## GLASS BLOCK LAYOUT TABLE

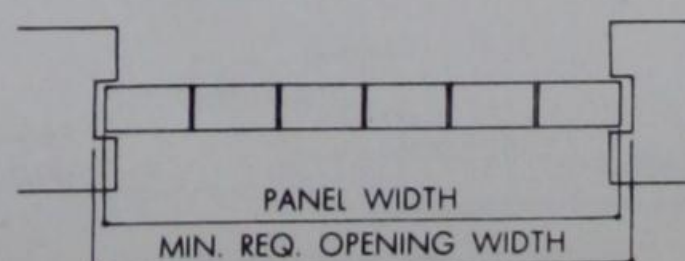
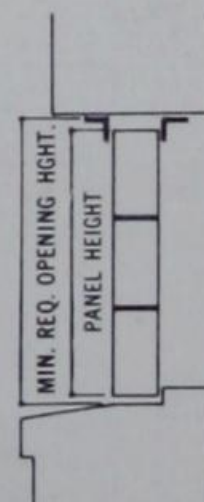
This table is based on Modular Coordination assuming  $\frac{3}{8}$ " mortar joints in face brick and  $\frac{1}{4}$ " mortar joints between glass blocks. For minimum required opening width, find table dimension and add  $\frac{1}{2}$ ". For minimum required opening height, find table dimension and add  $\frac{3}{8}$ " plus minimum lintel deflection.

No. of Blocks	Block Sizes		
	6"	8"	12"
1	0' 6"	0' 8"	1' 0"
2	1' 0"	1' 4"	2' 0"
3	1' 6"	2' 0"	3' 0"
4	2' 0"	2' 8"	4' 0"
5	2' 6"	3' 4"	5' 0"
6	3' 0"	4' 0"	6' 0"
7	3' 6"	4' 8"	7' 0"
8	4' 0"	5' 4"	8' 0"
9	4' 6"	6' 0"	9' 0"
10	5' 0"	6' 8"	10' 0"
11	5' 6"	7' 4"	11' 0"
12	6' 0"	8' 0"	12' 0"
13	6' 6"	8' 8"	13' 0"
14	7' 0"	9' 4"	14' 0"
15	7' 6"	10' 0"	15' 0"
16	8' 0"	10' 8"	16' 0"
17	8' 6"	11' 4"	17' 0"
18	9' 0"	12' 0"	18' 0"
19	9' 6"	12' 8"	19' 0"
20	10' 0"	13' 4"	20' 0"
21	10' 6"	14' 0"	21' 0"
22	11' 0"	14' 8"	22' 0"
23	11' 6"	15' 4"	23' 0"
24	12' 0"	16' 0"	24' 0"
25	12' 6"	16' 8"	25' 0"

## CHASE CONSTRUCTION

### SIZE LIMITATIONS

MAX. AREA 144 SQ. FT.  
MAX. HEIGHT 20 FEET  
MAX. WIDTH 25 FEET





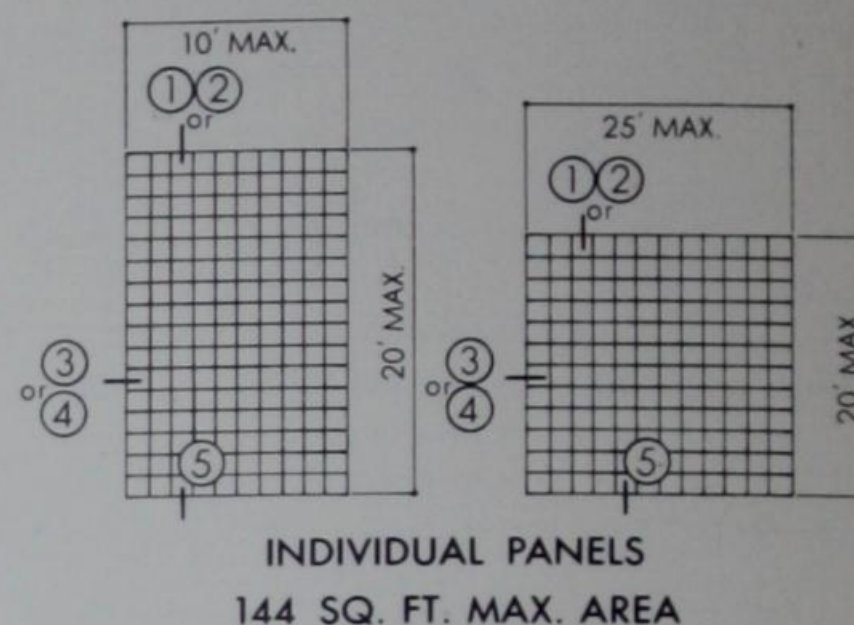
# GENERAL NOTES

On Pages 20 through 25 are shown elevations and sections of typical glass block panels. The large scale sections are typical head, jamb and sill details to show principles of construction only. Any structural members must be calculated for safe loading, and local building codes checked for any possible restrictions on panel sizes or detail. While single panels of glass block are limited to a maximum of 144 square feet, panels or curtain walls up to a maximum area of 250 square feet may be erected if properly braced to limit movement and settlement.

Panel anchors which are shown in details on Page 22 are used to give lateral support for glass block panels. If panel anchors cannot be used, substitute the chase construction that is shown on Pages 20-21.

Any glass block installation that is made in a wood partition shall have the wood adjacent to the mortar properly primed.

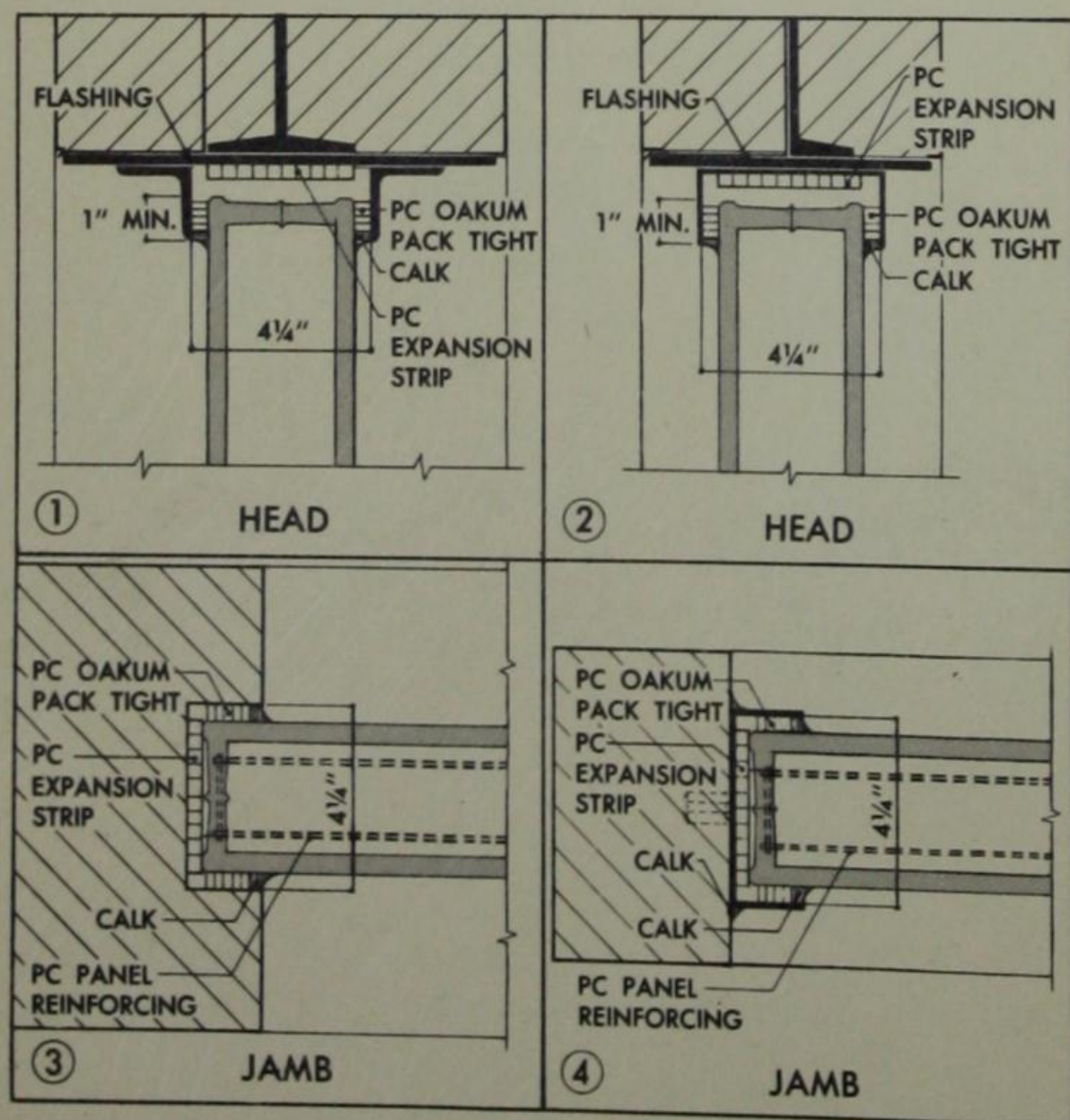
Underwriters' Listing. PC Glass Block panels, when installed in accordance with the special instructions on the glass block cartons, may be used for window openings subject to light fire exposure (Class F openings). Authorities having jurisdiction should be consulted before installation. For exact listing consult Pittsburgh Corning Corporation.



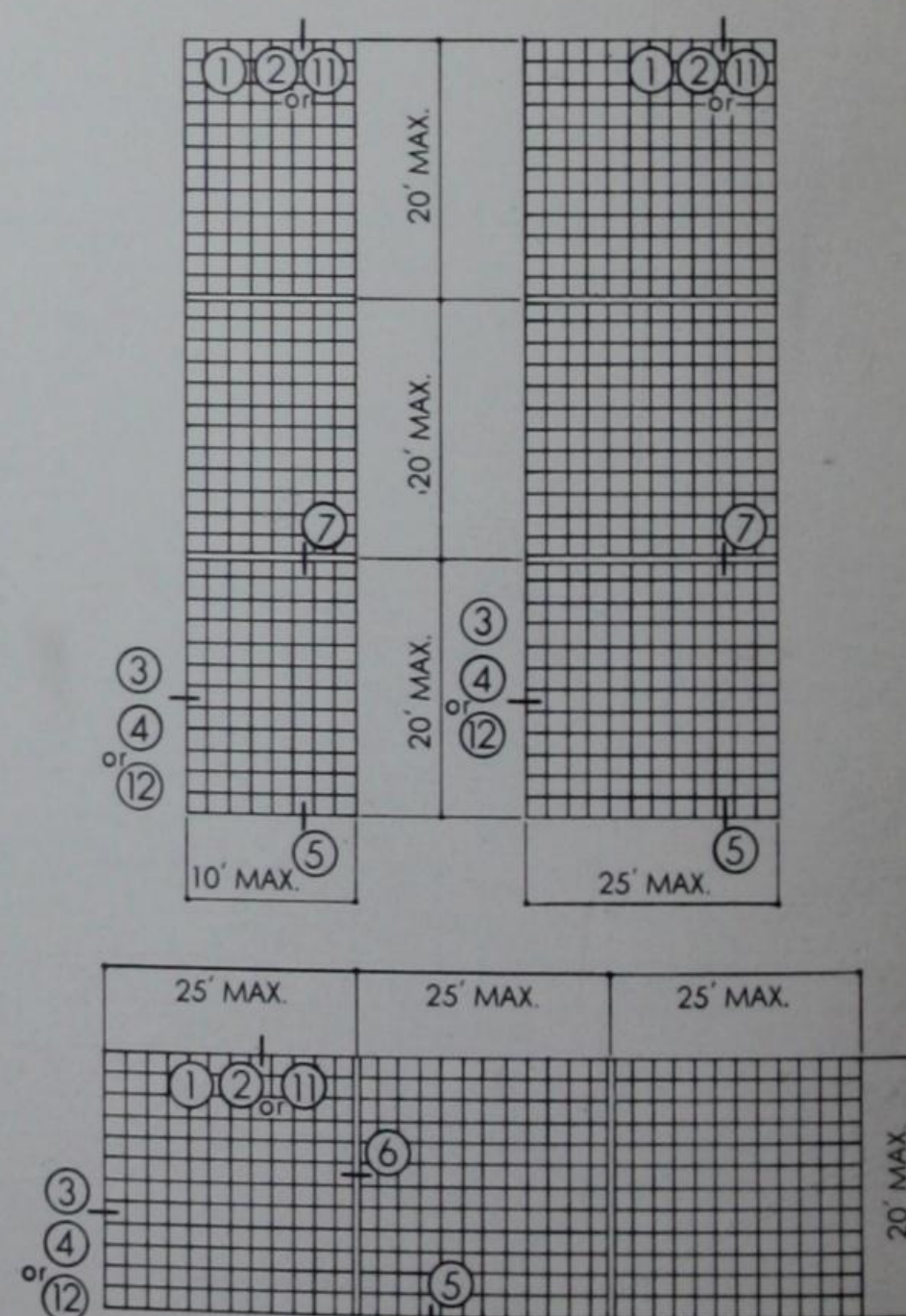
# PC

TYPICAL DETAILS  
UP TO 250 SQ. FT.

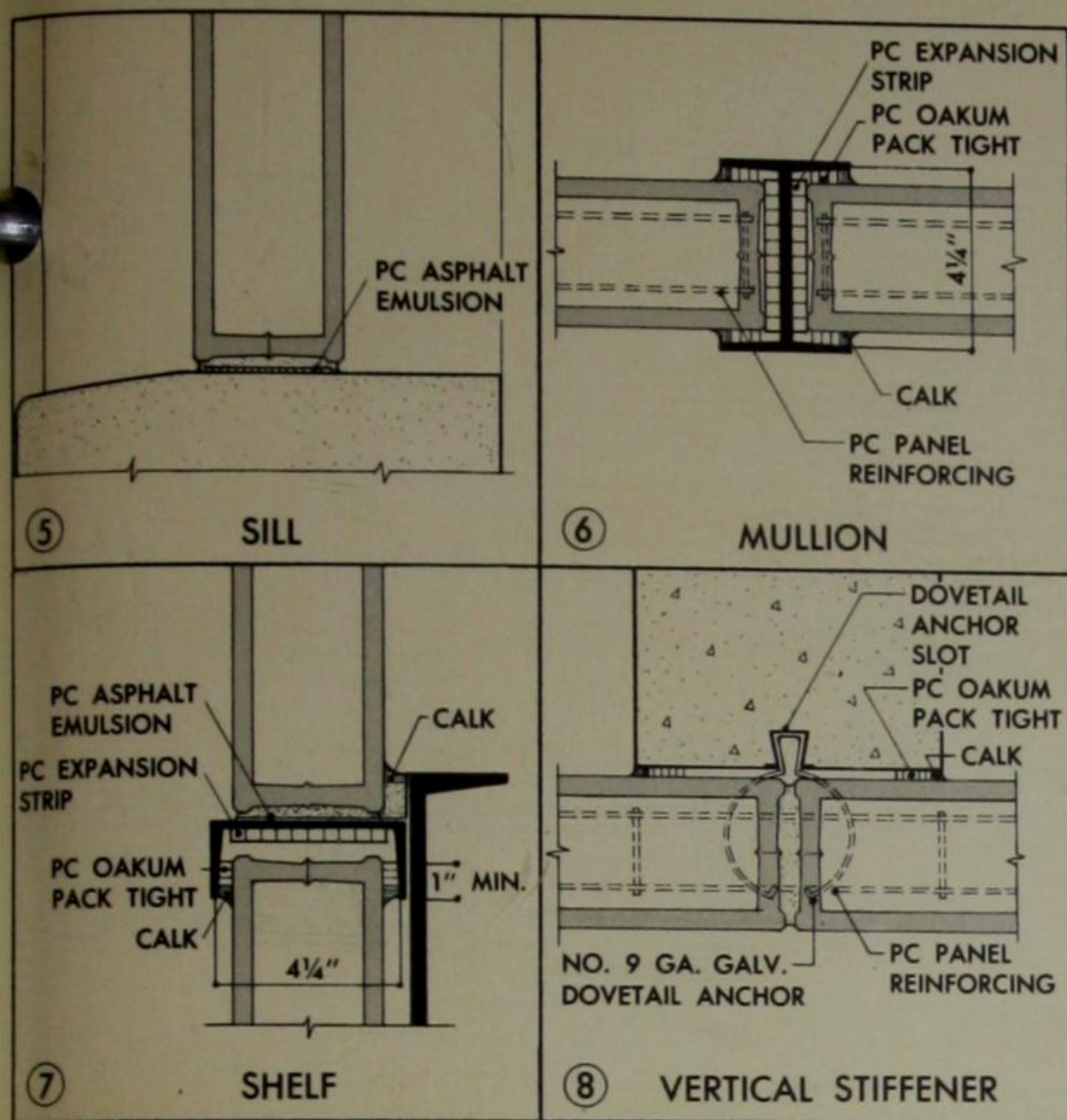
# PC



Scale: 1 1/2" = 1'-0"



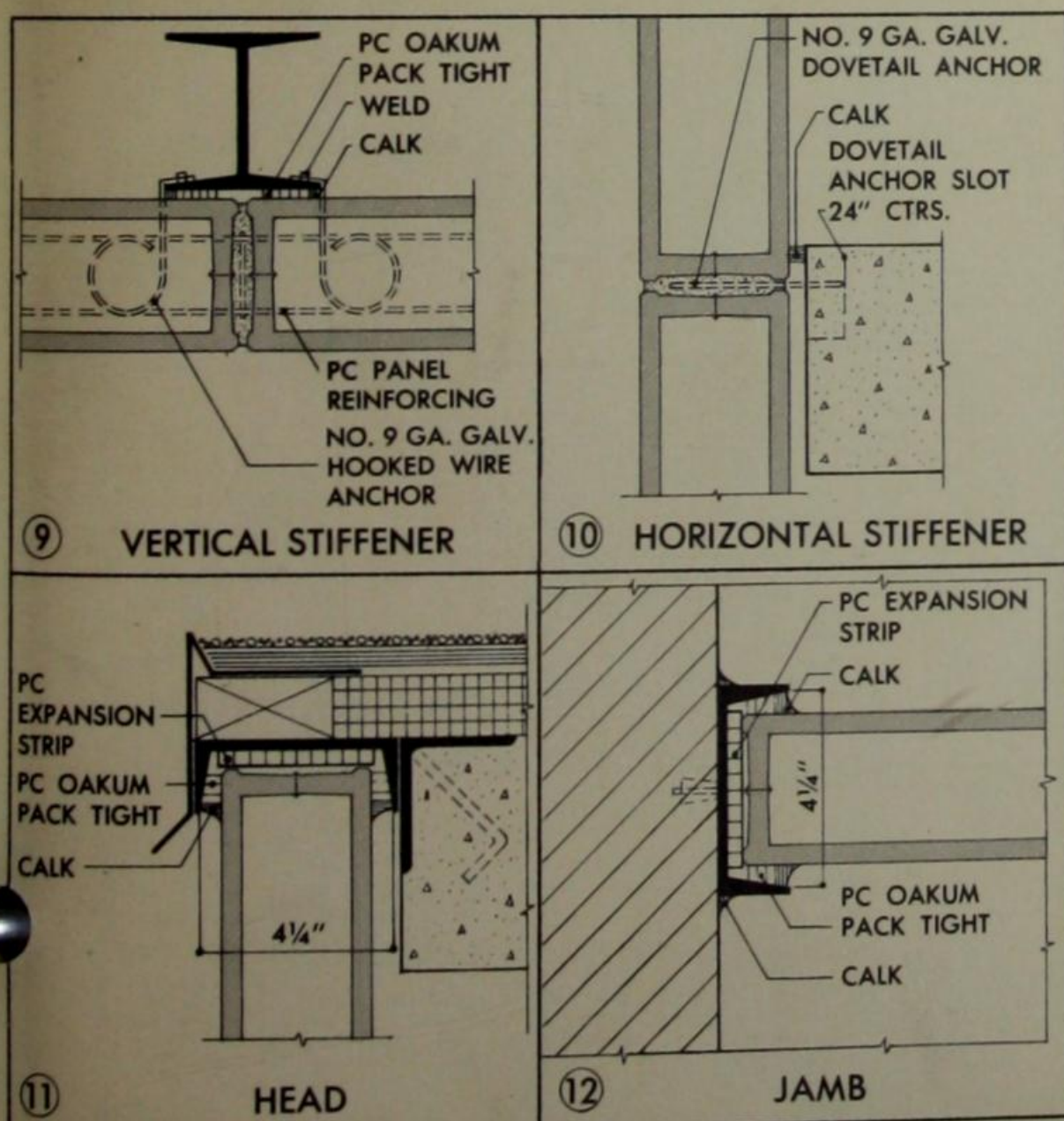




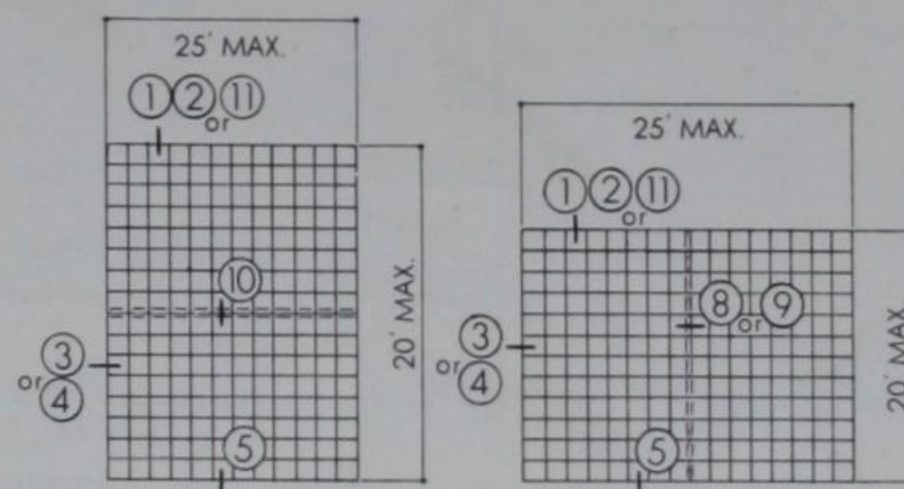
Scale: 1 1/2" = 1'-0"

# PC

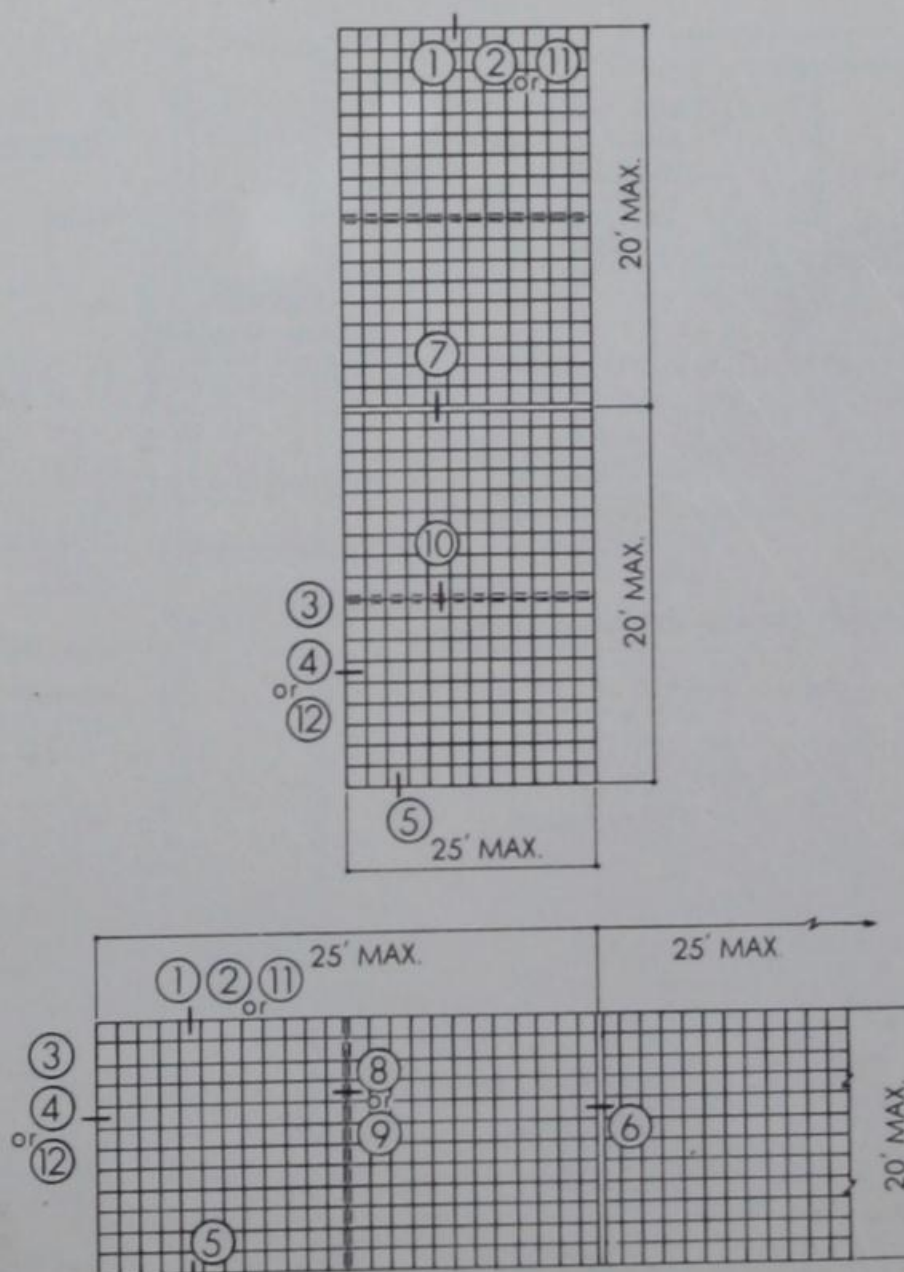
## CURTAIN WALLS AND EXTERIOR PANELS



Scale: 1 1/2" = 1'-0"



INDIVIDUAL PANELS  
250 SQ. FT. MAX. AREA



CONTINUOUS PANELS  
EACH PANEL 250 SQ. FT. MAX. AREA

Mirrors

Patterned  
Glass

Insulating  
Glass

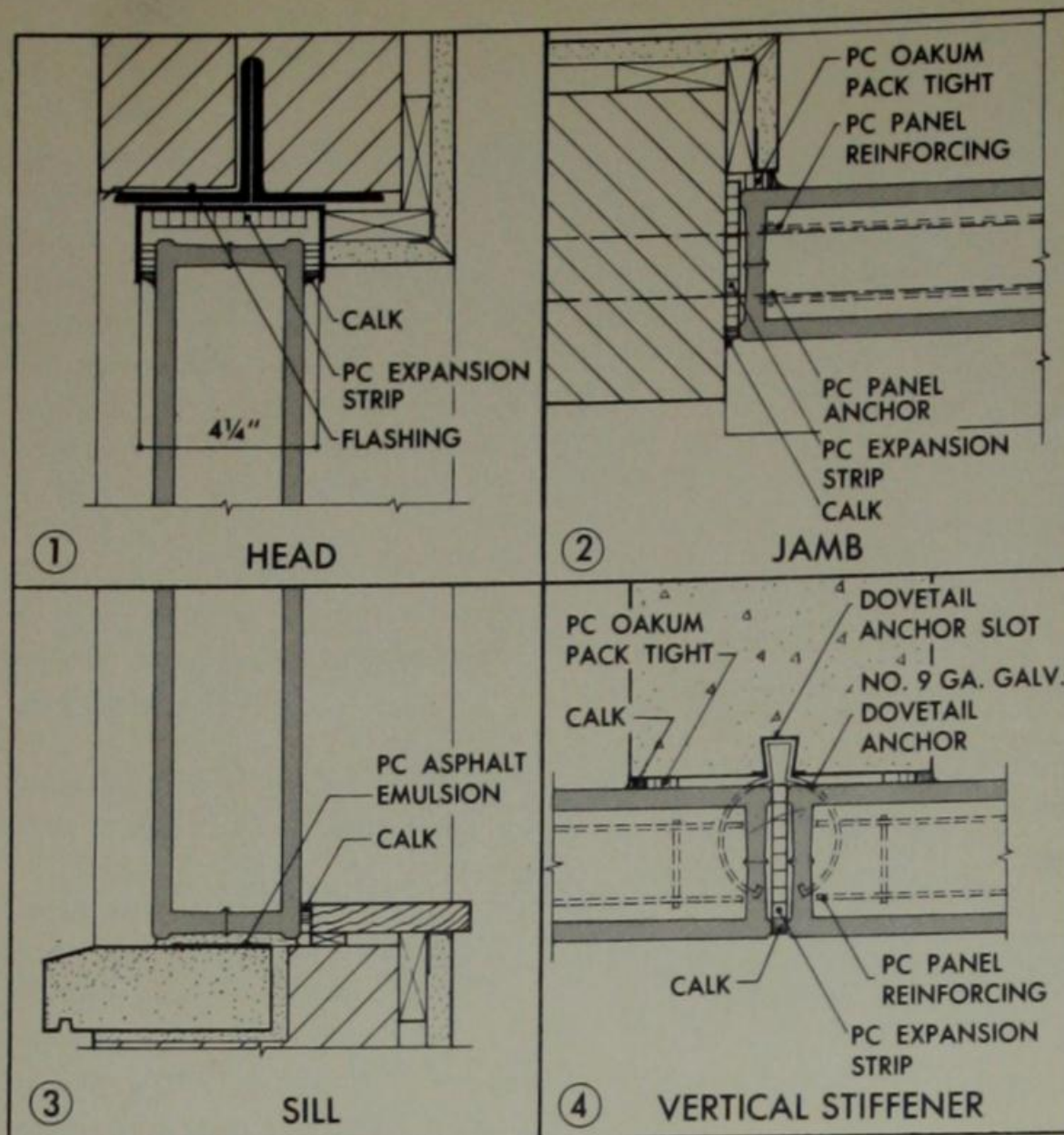
Storefronts

Art Glass

General Glass

Miscellaneous

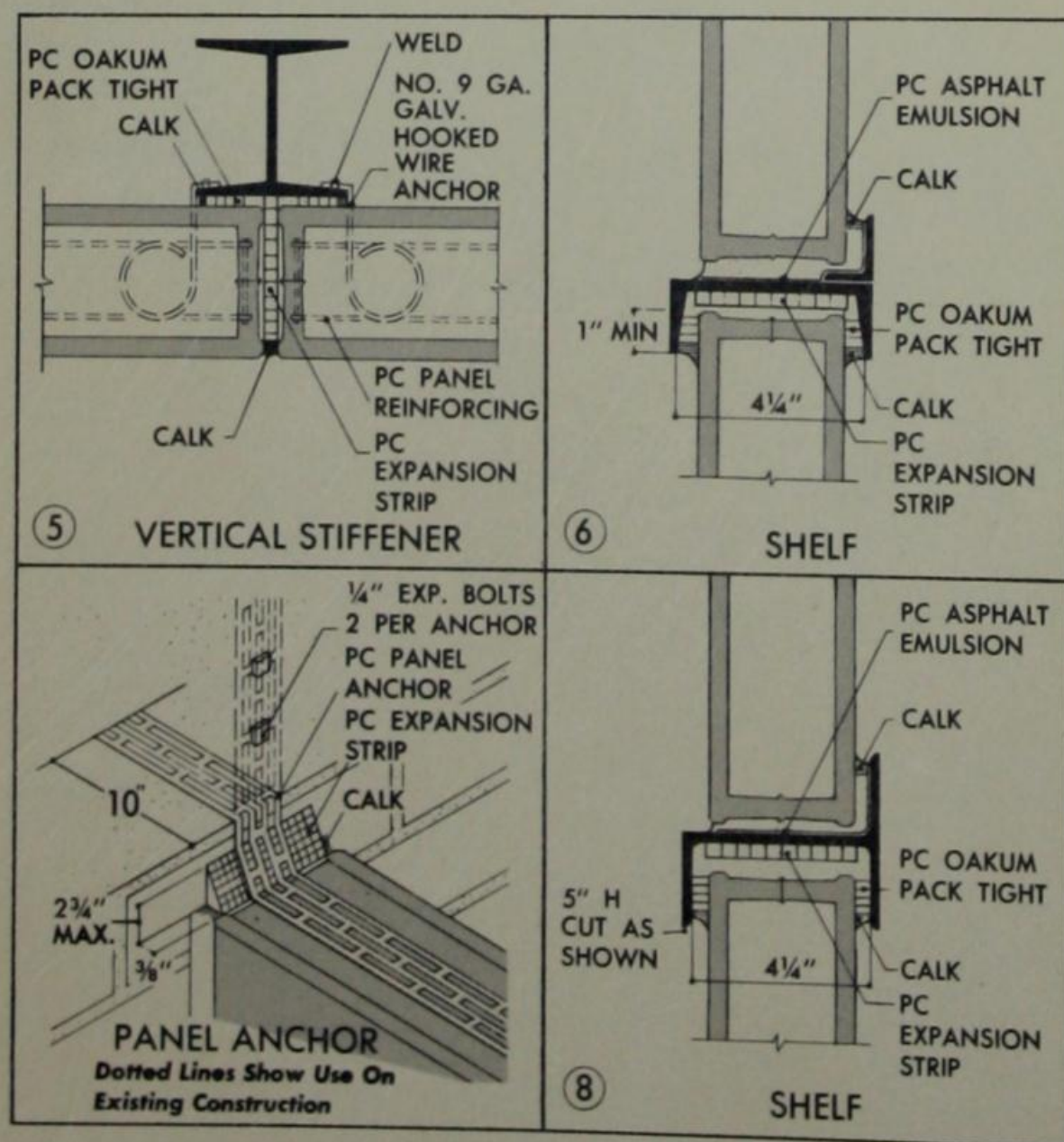




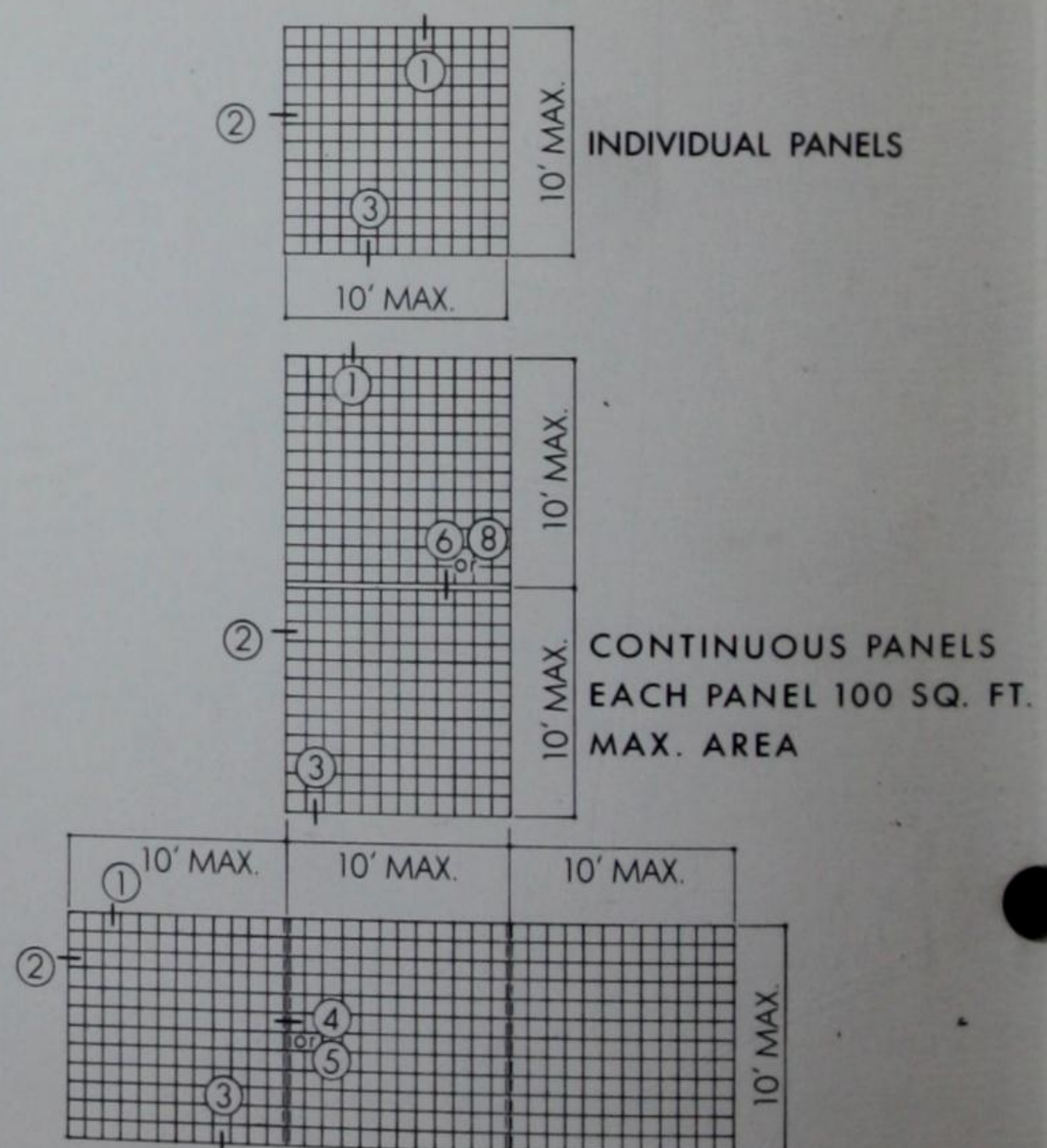
Scale: 1 1/2" = 1'-0"

# PC

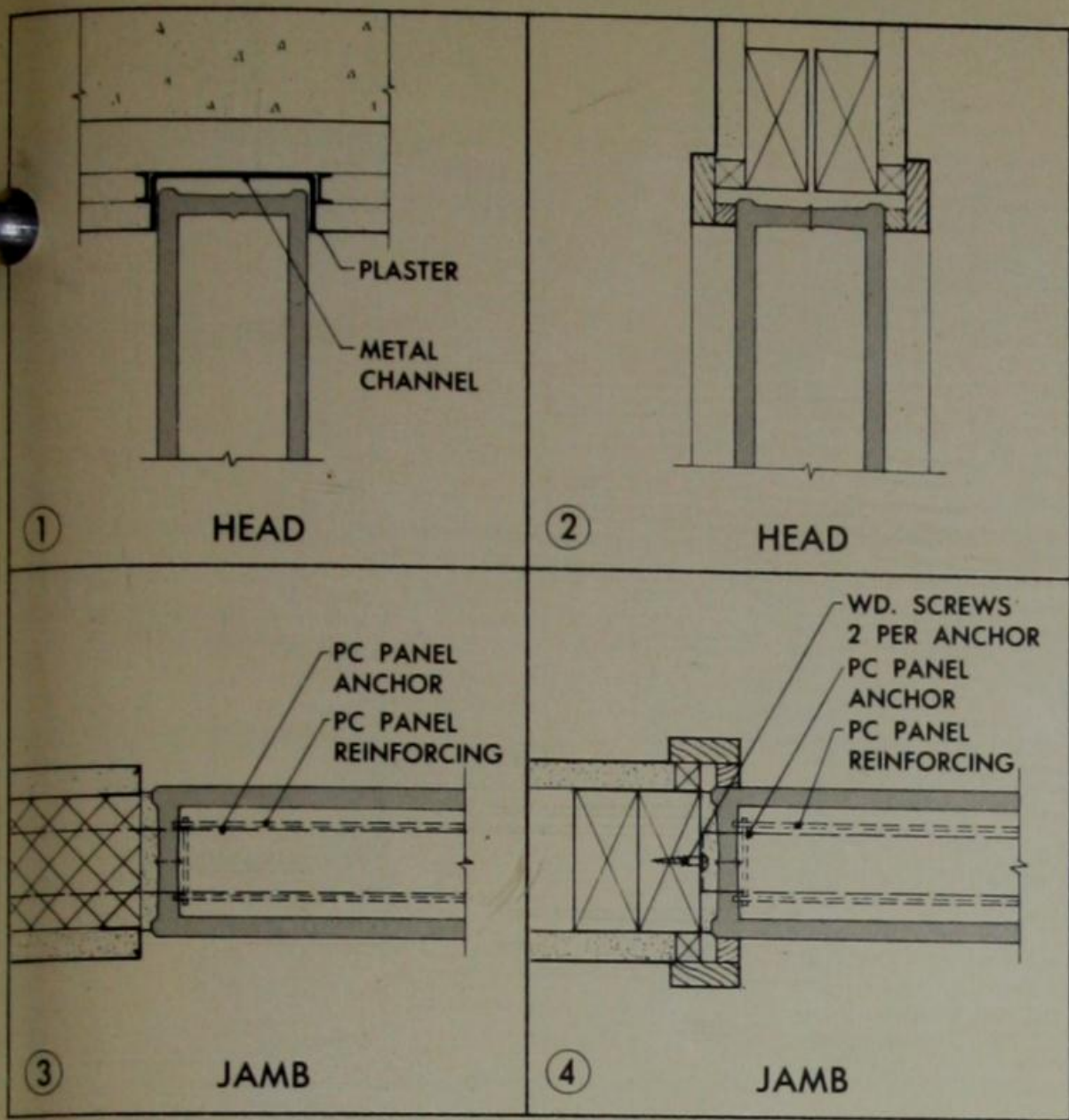
## EXTERIOR PANELS UP TO 100 SQ. FT.



Scale: 1 1/2" = 1'-0"



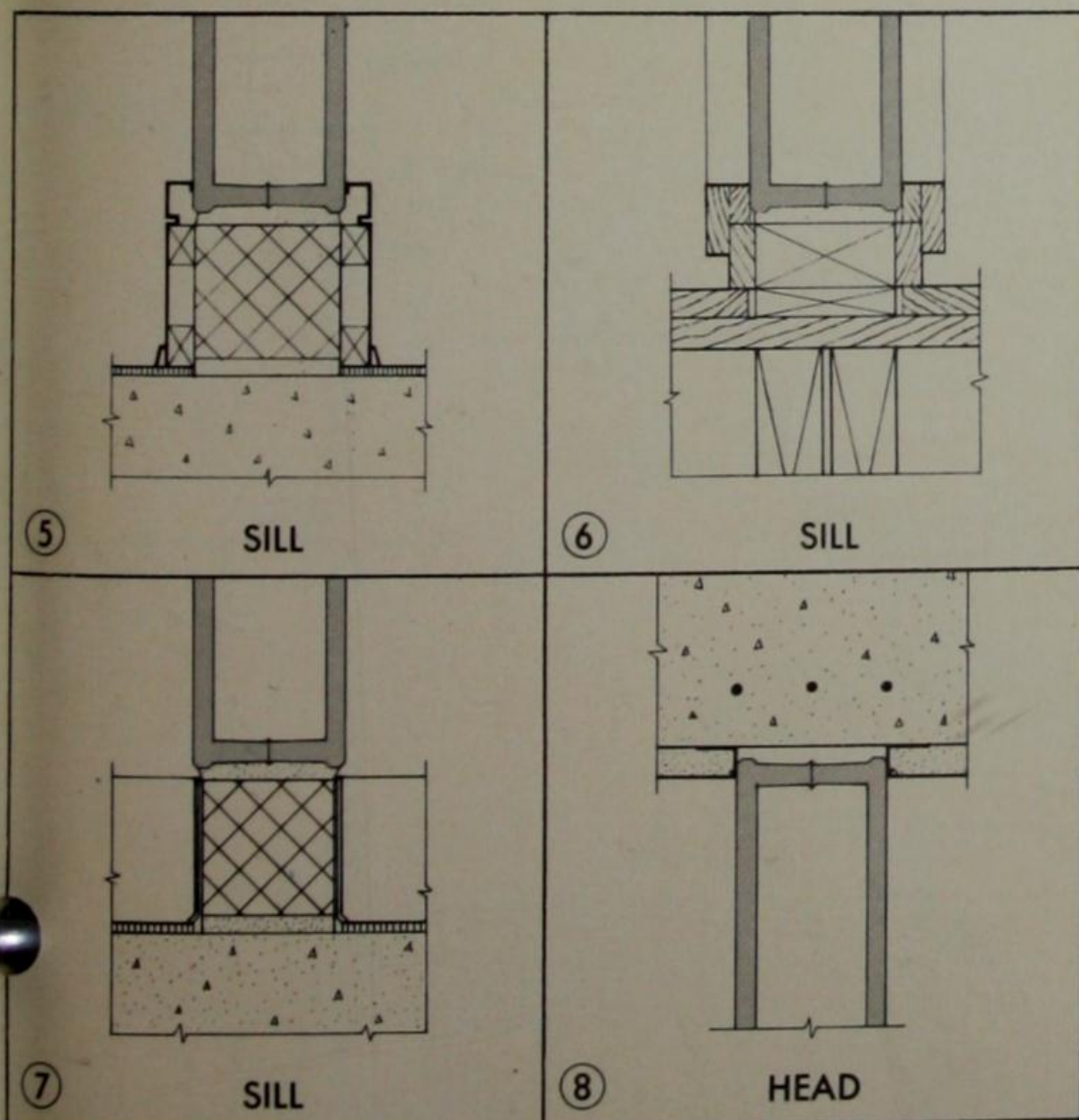




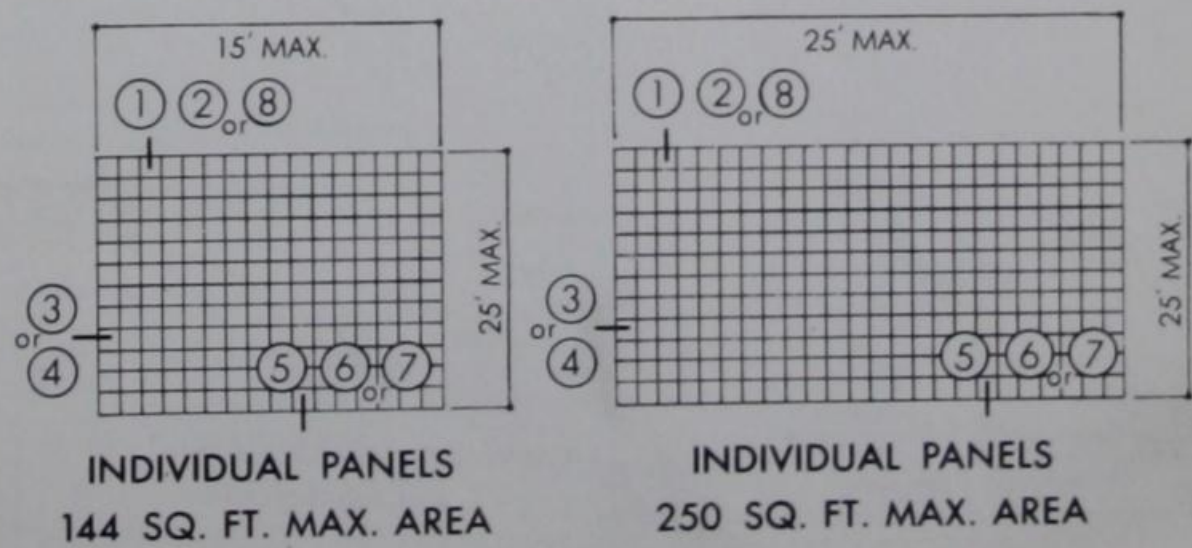
Scale: 1½" = 1'-0"

# PC

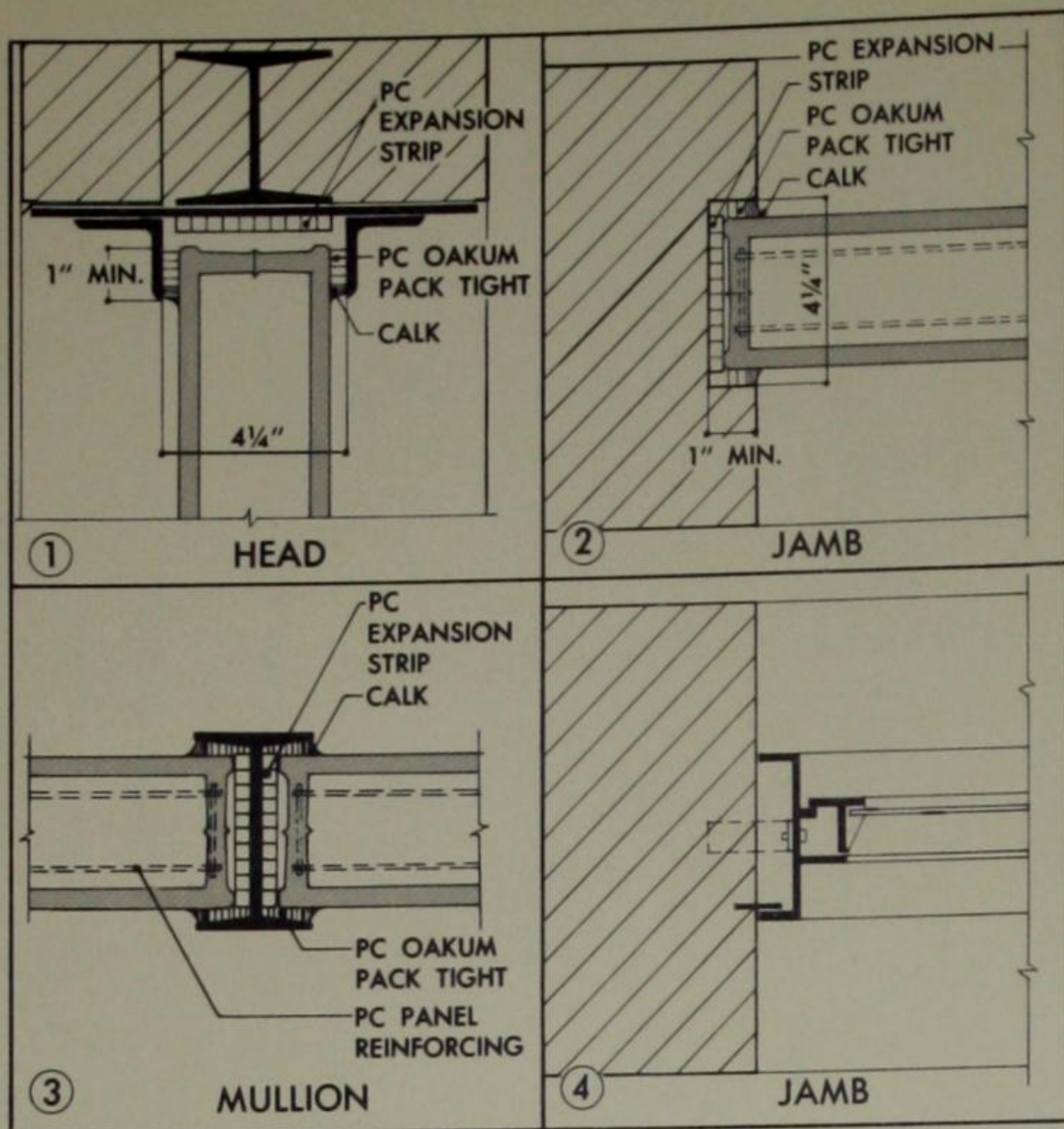
## INTERIOR PANELS TYPICAL DETAILS



Scale: 1½" = 1'-0"





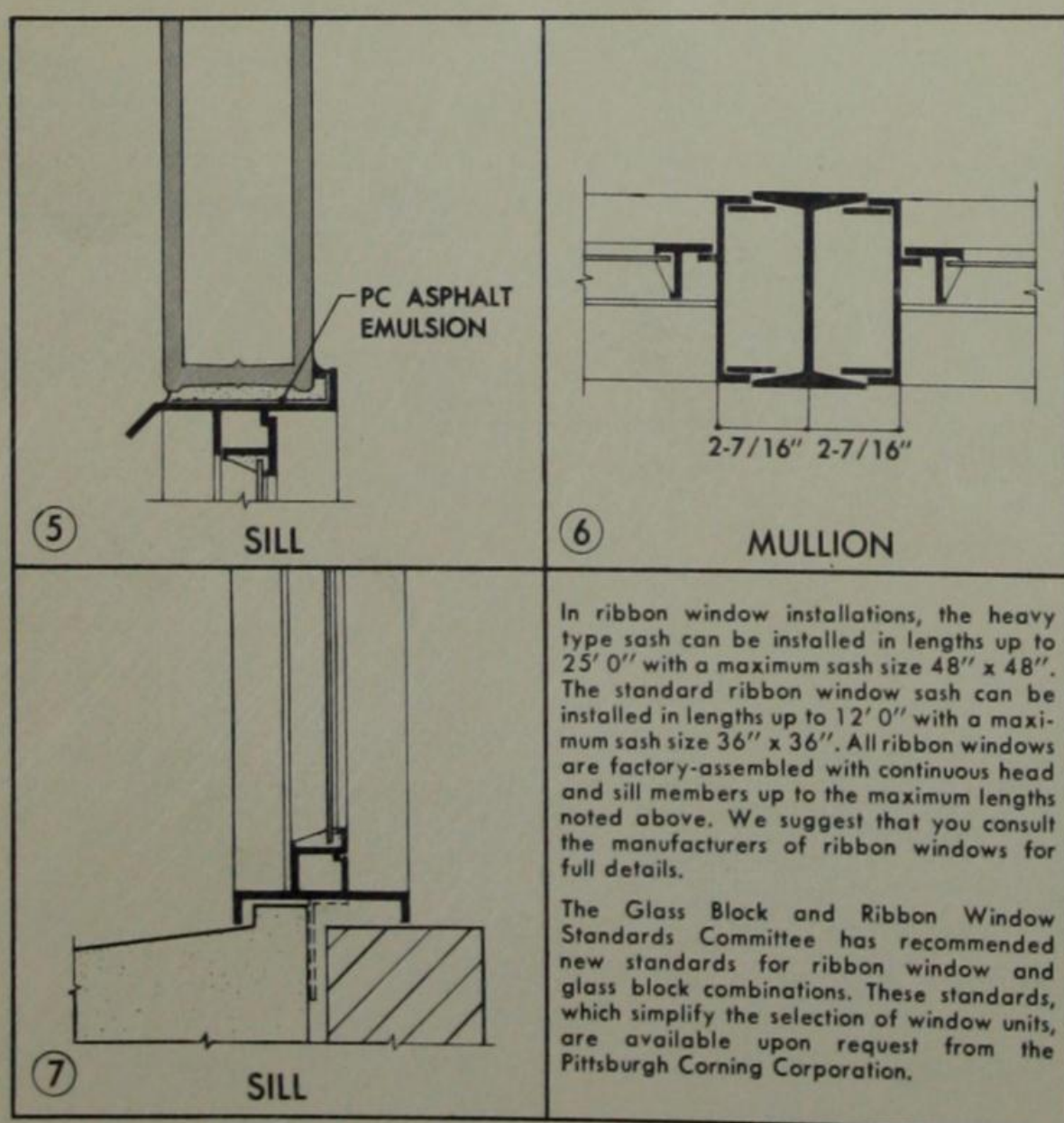


Scale: 1½" = 1'-0"

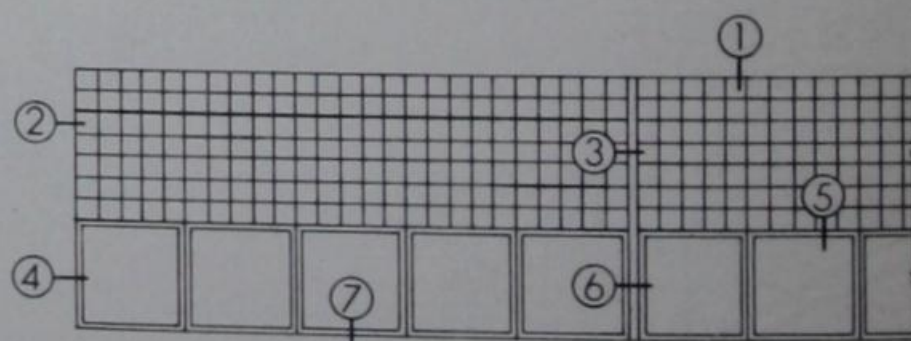
# PC

## RIBBON WINDOWS TYPICAL DETAILS

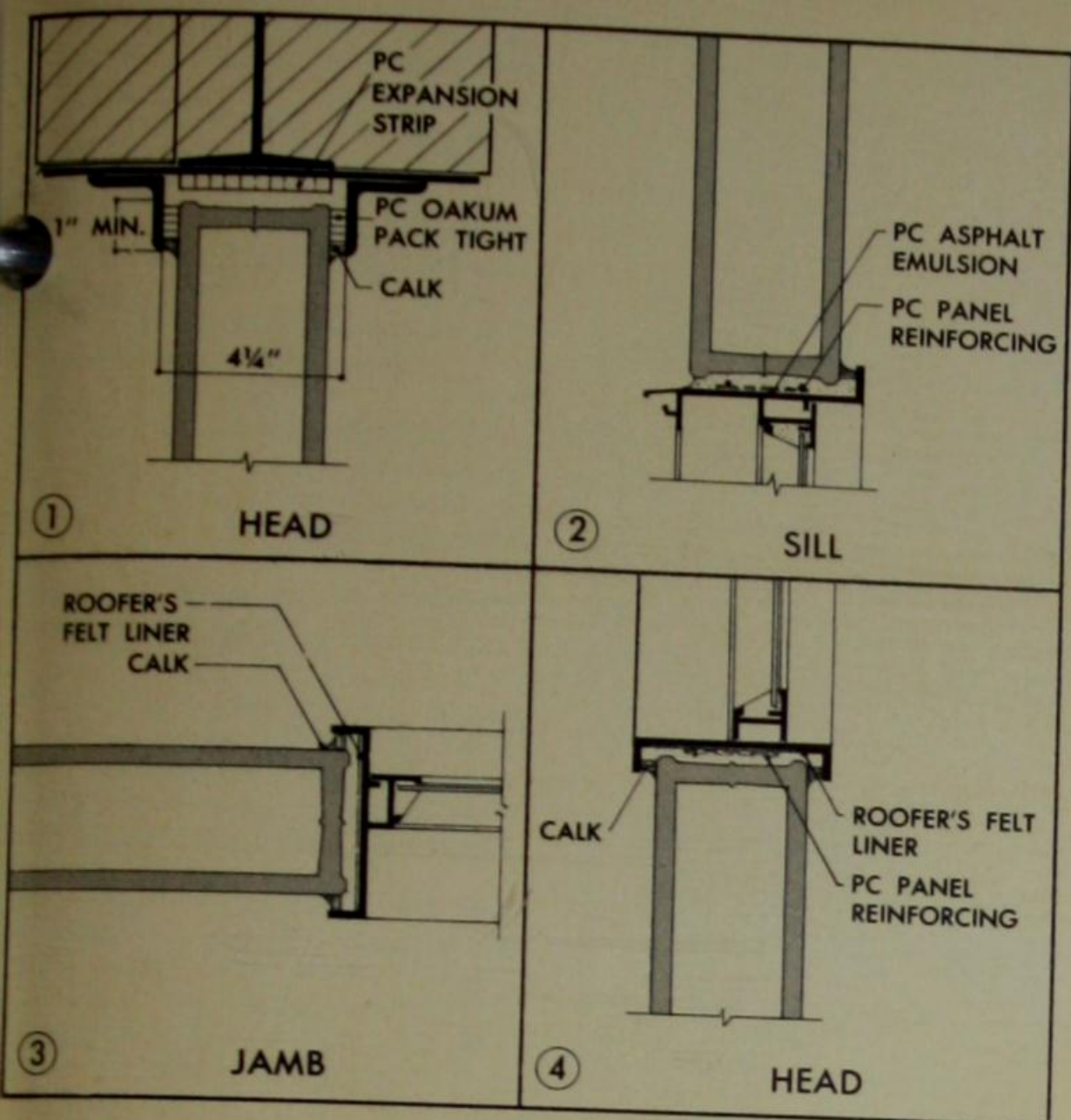
# PC



Scale: 1½" = 1'-0"



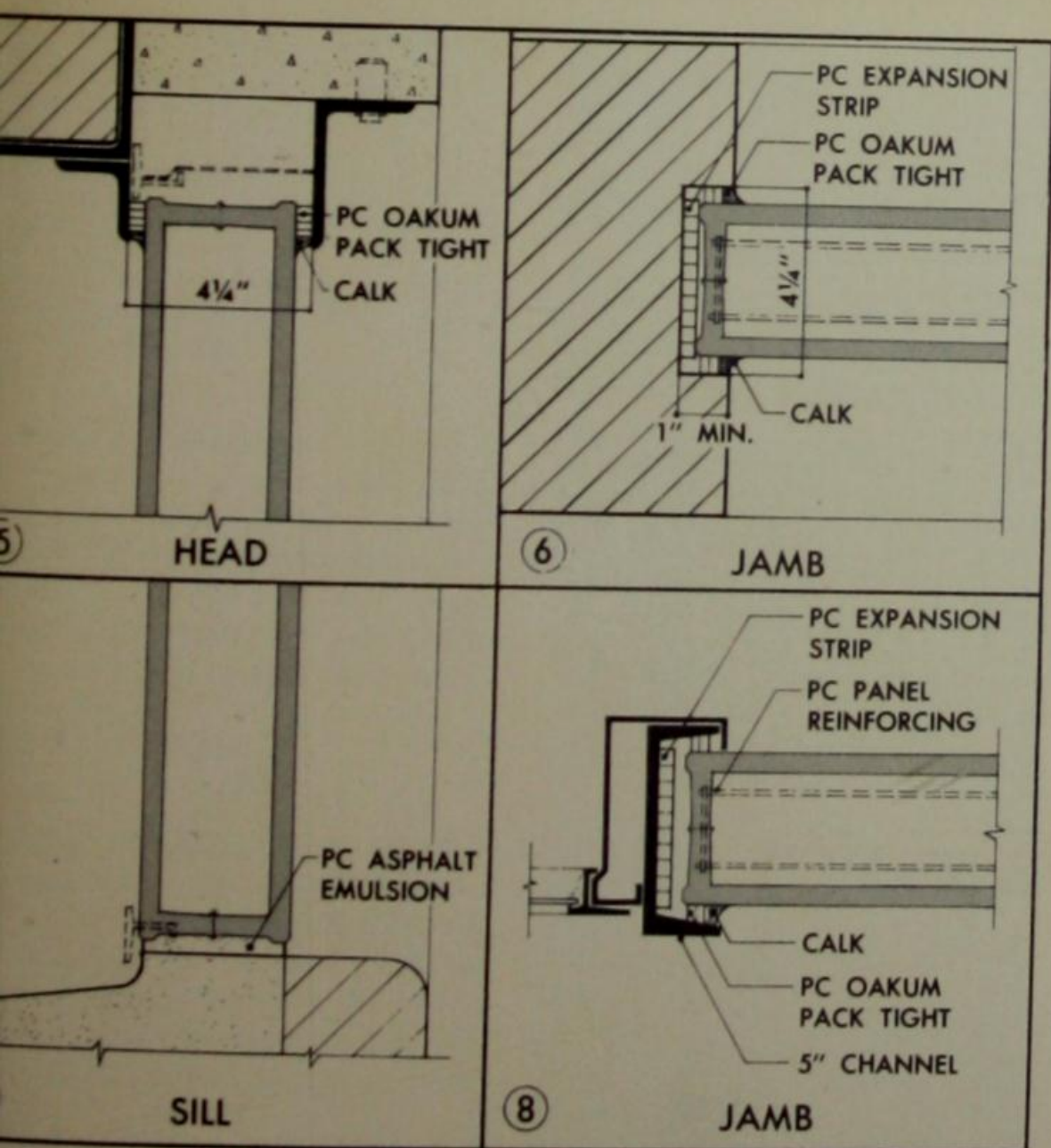




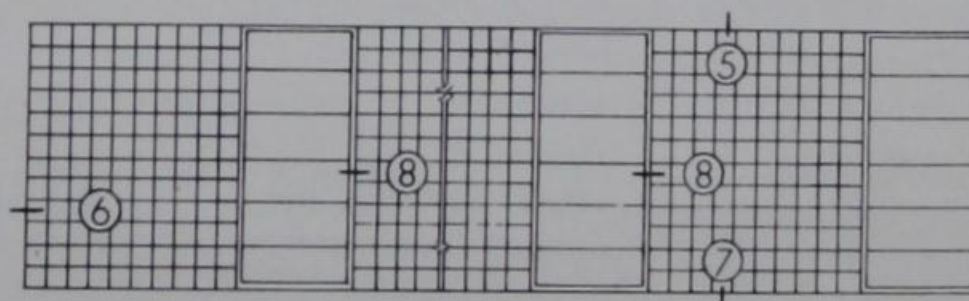
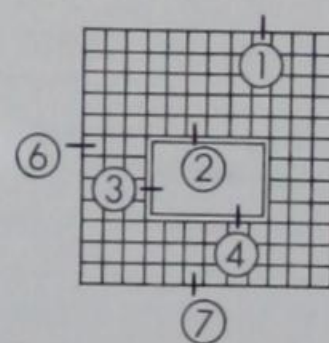
Scale: 1 1/2" = 1'-0"

# PC

## VERTICAL WINDOWS AND VENTILATORS



Scale: 1 1/2" = 1'-0"



Mirrors

Patterned Glass

Insulating Glass

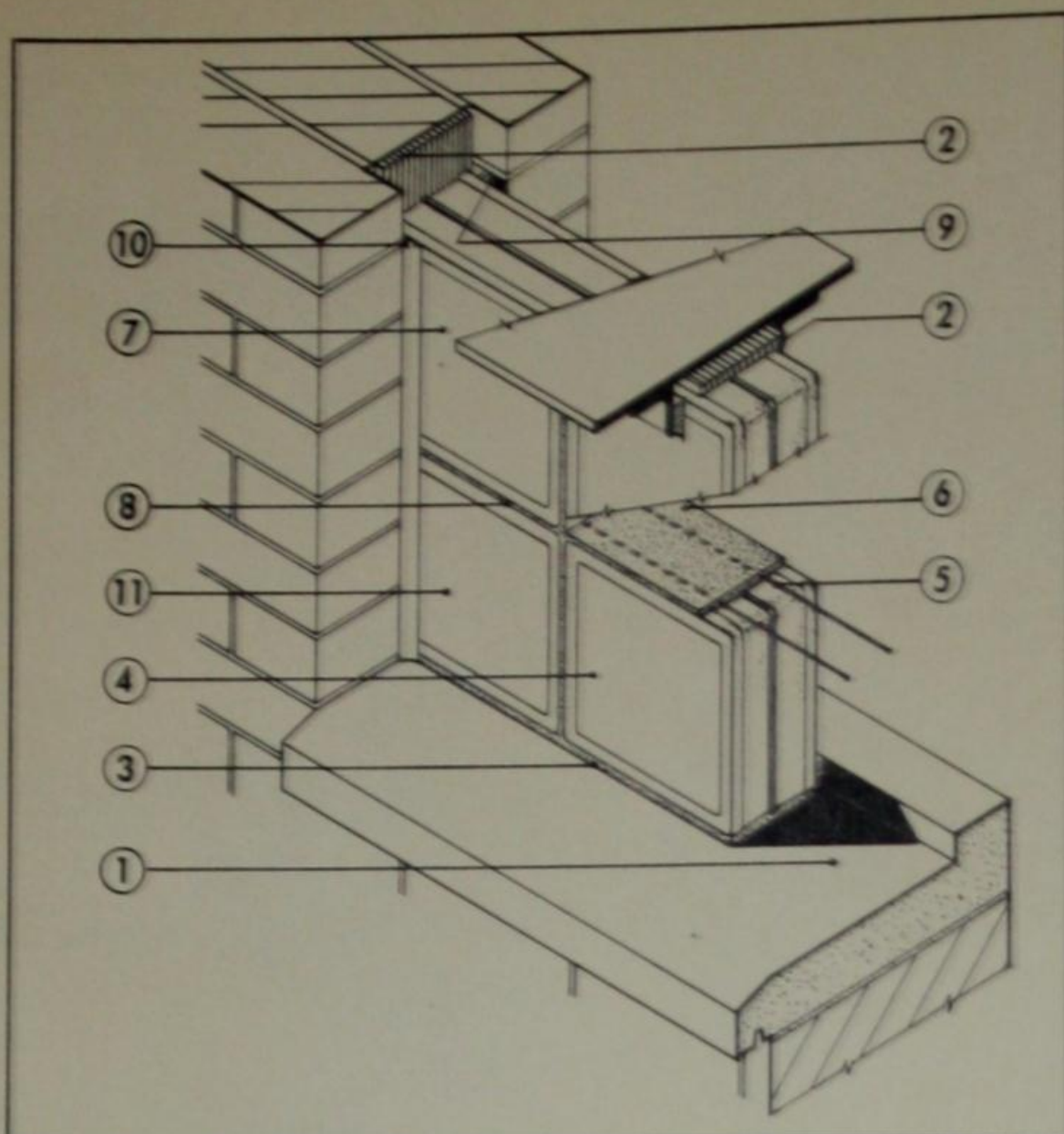
Storefronts

Art Glass

General Glass

Miscellaneous





# PC

## INSTALLATION OF GLASS BLOCKS

# PC

1. Sill area to be covered by mortar shall have a heavy coat of PC Asphalt Emulsion.
2. Adhere PC Expansion Strips to jambs and head with gobs of PC Asphalt Emulsion. Make certain expansion strip extends to sill.
3. When emulsion on sill is dry, place full mortar bed joint—do not furrow.
4. Set lower course of block. All mortar joints must be full and not furrowed. Steel tools must not be used to tap blocks into position.
5. Install PC Panel Reinforcing in horizontal joints where required as follows:
  - (a) Place lower half of mortar bed joint. Do not furrow.
  - (b) Press panel reinforcing in place.
  - (c) Cover panel reinforcing with upper half of mortar bed and trowel smooth. Do not furrow.
  - (d) Panel reinforcing must run from end to end of panels and where used continuously must lap 6 inches. Reinforcing must not bridge expansion joints.
6. Place full mortar bed for joints not requiring panel reinforcing—do not furrow.
7. Follow above instructions for setting succeeding courses of blocks.
8. Strike joints smoothly while mortar is still plastic and before final set. At this time rake out all spaces requiring calking to a depth equal to the width of the spaces. Remove surplus mortar from faces of glass blocks and wipe dry. Tool joints smooth and concave, before mortar takes final set.
9. After final mortar set pack PC Oakum tightly between glass block panel and jamb and head construction. Leave space for calking.
10. Calk panels as indicated on details.
11. Final cleaning of glass block faces shall not be done until after final mortar set.

**Note:** Good workmanship is essential to obtaining watertight panels. This is particularly important in the construction of Glass Block Curtain Walls. Follow the installation procedure above and the specifications on Pages 28 and 29 for best results.



**PC ASPHALT EMULSION** — To be used on all sills to form a waterproof joint. Also used to adhere expansion strips to jambs and heads before installing glass blocks. See specifications (page 28) for proper application.

For sills and adhering of expansion strips — estimate one (1) gallon for approximately 150 lin. ft.

Available in one-quart, one-gallon and five-gallon containers.



**PC MORTAR WATERPROOFER** — To be added to the mortar to conform with PC specifications. Use one (1) quart per bag of cement. (See Estimating Data below.)



Available in one-quart, one-gallon and five-gallon containers.

**PC OAKUM** — (Non-Staining, dry-rot treated, sliver type) — To be used as a lateral cushioning for glass block panels by tightly packing between panel faces and the supporting structure. See details for proper application.



For packing both faces of panels laid up in 4 1/4" wide chases, estimate 2 1/2 lbs. (one tube) for 30 lin. ft. of chase. Available in wound tubes, weighing 2 1/2 lbs. net, packaged in handy dispenser cartons. Six individually-packaged tubes per shipping carton.

# PC

## ACCESSORY MATERIALS FOR PC GLASS BLOCKS

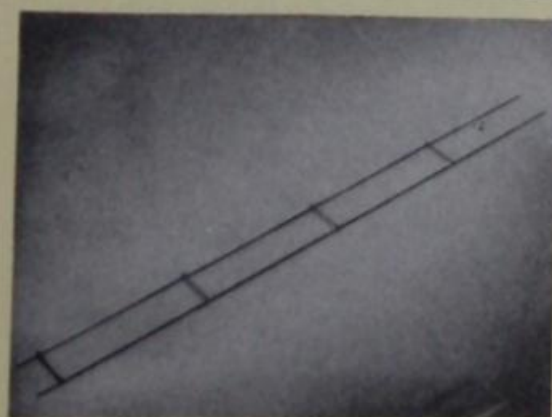
**EXPANSION STRIPS** — To be used in expansion spaces at jambs and heads installed in accordance with PC specifications.

Available in the following size:  
1" x 4 1/8" x 24" (for use in chase construction).

For panel anchor construction, standard 4 1/8" wide strips can easily be cut 3" width required.

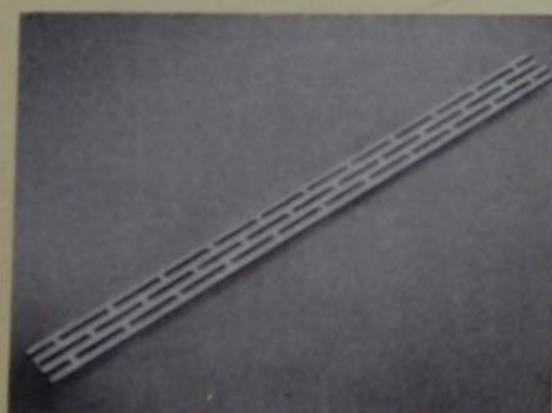


**PANEL REINFORCING** — To be used in horizontal joints of glass block panels, spaced and installed in accordance with PC specifications. Panel Reinforcing is formed of two No. 9 gage galvanized wires spaced 2" apart with 14 gage galvanized cross wires welded every 8".



Available in 8' lengths.

**PANEL ANCHORS** — To be used for supporting panels up to 100 sq. ft. area where permitted by building requirements. Spaced and installed in accordance with PC specifications. Panel Anchors are No. 20 galvanized steel perforated after galvanization.



Available in 2'-0" lengths, 1 3/4" wide.

# PC

### ESTIMATING DATA

for 100 sq. ft. of panel, 1/4" mortar joints

nominal block size	6"	8"	12"
no. of blocks	400	225	100
panel weight, lbs.	2000	1800	1900
mortar volume, cu. ft.	4.3	3.2	2.2

AIA File No. 12.1

Mirrors

Patterned  
Glass

Insulating  
Glass

Storefronts

Art Glass

General Glass

Miscellaneous



**GENERAL CONDITIONS:** The "General Conditions" of the contract are a part of these specifications.

**SCOPE OF THE WORK:** This contractor shall furnish all labor and materials to install all glass blocks where shown on the drawings or specified hereunder. This shall include the furnishing and installation of all expansion strips, oakum packing, panel reinforcing, panel anchors, calking, asphalt emulsion, and other labor materials necessary for a complete installation. This contract does not include the preparation of the structure to receive the glass block panels, such as chases, stiffeners, etc., except as hereinafter specified.

**MATERIALS: Glass Blocks** . . . shall be partially evacuated, hollow masonry units made of clear, colorless glass, as manufactured by the Pittsburgh Corning Corporation. These units shall be made by fusing two sections of pressed glass together at elevated temperatures. Edge construction of the units shall be such that a "key-lock" mortar joint is formed. Each unit shall be edge-coated with a resilient plastic to improve bond with mortar. Color Glass Blocks shall be as manufactured by Pittsburgh Corning Corporation and shall consist of a fired-on ceramic enamel coating on one face of a standard unit as described above.

**Patterns—Sizes** . . . shall be as shown on the drawings or as specified hereunder: (Indicate PC patterns, sizes and locations. Where applicable indicate Soft-Lite Edge).

**Expansion Strips** . . . where shown or required, shall be PC Expansion Strips as furnished by the Pittsburgh Corning Corporation.

**Asphalt Emulsion** . . . where shown or required, shall be PC Asphalt Emulsion as furnished by the Pittsburgh Corning Corporation.

**Panel Reinforcing** . . . shall be PC Panel Reinforcing of galvanized steel double wire mesh formed of two parallel wires (No. 9 gage) 2 in. on centers with electrically welded cross wires (No. 14 gage) at regular intervals. This reinforcing

# PC SUGGESTED SPECIFICATIONS

# PC

shall be embedded in horizontal mortar joints on approximately 24 in. centers, and in joints immediately above and below all openings within panels. Reinforcing shall run continuously from end to end of panels and shall be lapped not less than 6 in. wherever it is necessary to use more than one length. Do not bridge expansion joints with reinforcing.

**Panel Anchors** . . . where shown on drawings shall be PC Panel Anchors as furnished by the Pittsburgh Corning Corporation and shall be No. 20 gage perforated steel strips 24 in. long by 1¾ in. wide galvanized after perforating. All panel anchors must be bent within expansion joints, and shall generally be placed 24 in. apart occurring in the same joint as panel reinforcing and must be completely embedded in the mortar joint of the glass block panels.

**Mortar** . . . shall be 1 part Portland Cement, ¼ to 1¼ parts lime, and sand equal to between 2¼ and 3 times the amount of cementitious material (cement plus lime), all measured by volume, plus an integral type waterproofer. If a waterproof Portland Cement is used, the integral type waterproofer shall be omitted. For interior panels the waterproofer shall be omitted.

Admixtures in the form of setting accelerators and anti-freeze compounds shall not be used.

If desired, a mortar prepared from masonry cement meeting requirements of ASTM C-91, Type II, incorporating a metallic stearate-type waterproofer, and mixed in accordance with the manufacturer's recommendations is an acceptable alternate.

Any combinations of the above mortar mixes will fall within types A-1, A-2 or B mortar as recommended by the "American Standard Building Code Requirements for Masonry," and approved by the American Standards Association as American Standard A41.1 (as revised), or specifications for Mortar for Unit Masonry, ASTM Designation C-270.



Mixing: The mortar shall be mixed to a consistency as stiff as will permit good working and shall be drier than mortar for ordinary brickwork. Retempering the mortar after it has taken its initial set shall not be permitted.

Mortar Type	PROPORTIONS BY VOLUME			Minimum Compressive Strength of 2" Cube at 28 days (P.S.I.)
	Portland Cement	Hydrated Lime or Lime Putty (Allowable Range)	Aggregate	
A-1	1	¼*	Between 2¼ and 3 times the volume of cementitious materials (cement plus lime)	2500
A-2	1	More than ¼ but less than ½	Between 2¼ and 3 times the volume of cementitious materials (cement plus lime)	1800
B	1	½ to 1¼	Between 2¼ and 3 times the volume of cementitious materials (cement plus lime)	750

\*Maximum and minimum.

Portland Cement... shall be Type 1 conforming to the Standard Specifications for Portland Cement, ASTM Designation C-150-49. If waterproof Portland Cement is used it shall be of a type as specified by the Architect. If desired, a waterproof, high early-strength Portland Cement may be used.

Lime... shall be a high calcium lime, or a pressure-hydrated dolomitic lime, meeting the requirements of specifications for Hydrated Lime for Masonry Purposes, ASTM Designation C-207, Type S.

Sand... shall conform with the Standard Specifications for Aggregate for Masonry Mortar, ASTM Designation C-144-44, for thin joints.

PCC

PCC

Waterproofing... shall be PC Mortar Waterproofing Type NV-3389 (metallic earate type). It shall be added to the mortar at the time of mixing and in the proportion shown on the can label, except where a waterproof Portland Cement or prepared waterproofed masonry cement mortar is used. In the latter cases, no waterproofing shall be added at the time of mixing.

Oakum... where indicated on drawings or required as a lateral cushioning for glass block panels at jambs, heads and intermediate supports, shall be PC Oakum (non-staining, dry-rot treated, sliver type) as furnished by the Pittsburgh Corning Corporation.

Grouting... shall be as specified by the Architect and shall be a non-staining, waterproof mastic. This shall be evenly applied to the full depth of recesses as indicated on the details.

Flashings... Unless otherwise specified, contractor shall furnish and install in locations shown or where required, flashings as are necessary to provide a complete installation.

INSTALLATION... Areas at the sill to be covered by mortar shall be given a heavy coat of asphalt emulsion which shall be allowed to dry before blocks are laid. Where required, expansion strips shall be adhered to head and jambs by the use of gobs of asphalt emulsion and shall run continuously from end to end of expansion space.

All mortar joints must be completely filled with mortar and shall not be furrowed. Mortar must not bridge across expansion joints. Blocks shall be laid straight, plumb and true to dimensions, with ¼ in., or as otherwise specified, visible width mortar joints. Joints shall be tooled smooth and slightly concave just before mortar attains initial set so that the exposed edges of the blocks are sharp, clean lines. The number of courses of blocks laid in successive lifts shall be limited to prevent freezing out of the mortar and movement of the blocks.

CLEANING... Surplus mortar shall be removed and the faces of the blocks shall be wiped dry at the time joints are tooled. Cleaning is facilitated by the use of an ordinary household scrub brush having stiff bristles. Final cleaning shall be done by others after mortar has attained final set.

Mirrors

Patterned Glass

Insulating Glass

Storefronts

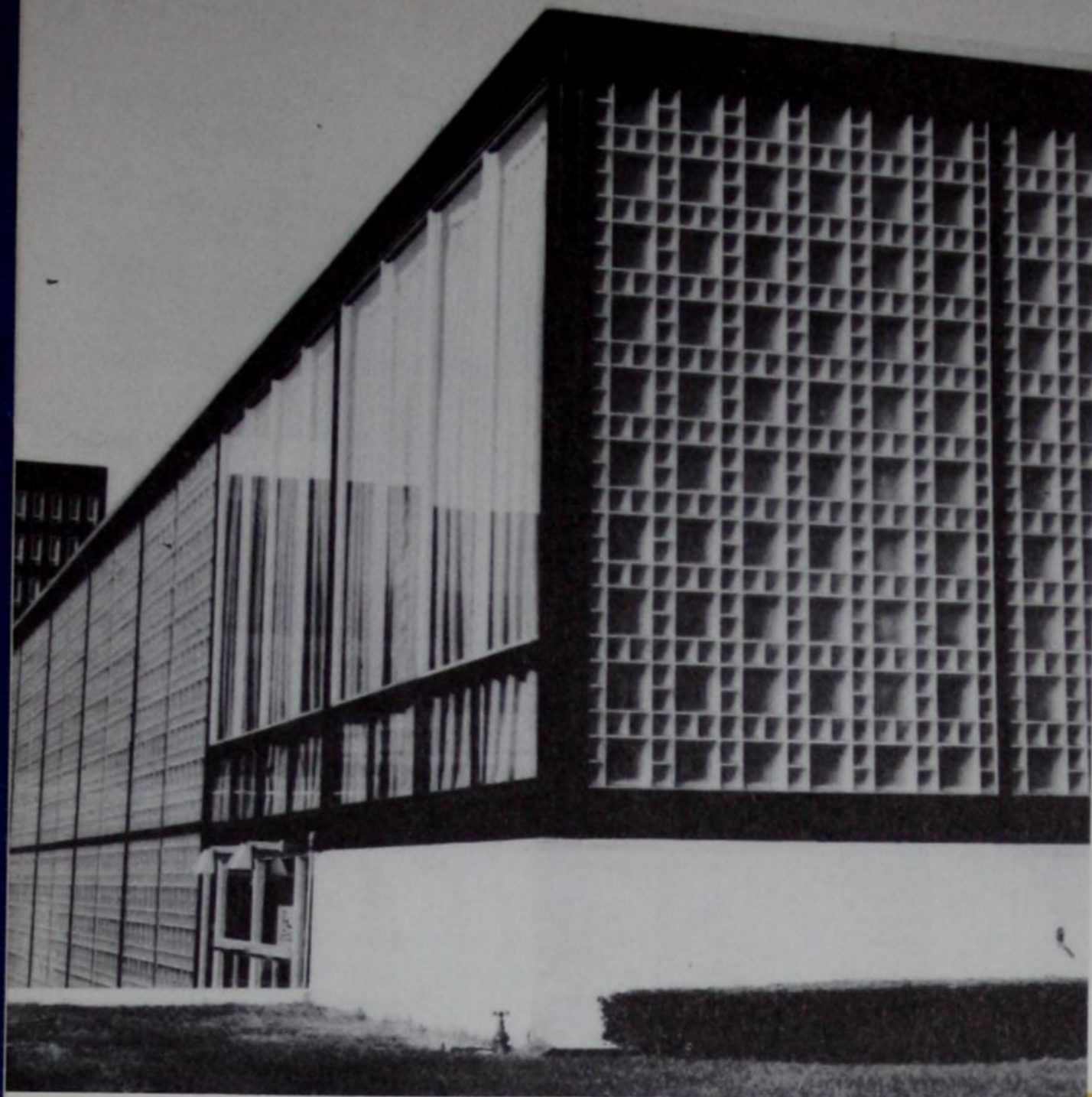
Art Glass

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Miscellaneous

A.I.A. File No. 12-J





CORNING GLASS CENTER  
Corning, New York  
Architects: Harrison & Abramovitz, A.I.A., New York

# PC

GLASS BLOCK  
CURTAIN WALLS

# PC



CROMBY STATION, PHILADELPHIA ELECTRIC COMPANY  
Philadelphia, Pennsylvania  
Consulting Architects: Harbeson, Hough, Livingston & Larson, A.I.A., Philadelphia





NEW YORK SCHOOL OF PRINTING  
New York, New York  
Architects: Kelly & Gruzen, A.I.A., New York

# PC

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For further information on PC Glass Blocks, contact the General Office in Pittsburgh or the nearest sales office listed below:

### BOSTON, MASSACHUSETTS (Watertown 72, Mass.)

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### NEW YORK 17, NEW YORK

579 Fifth Avenue  
MUrray Hill 8-8350

### CHICAGO 6, ILLINOIS

The Engineering Building  
205 West Wacker Drive  
Financial 6-2376

### PHILADELPHIA 2, PENNSYLVANIA

Lewis Tower Building  
225 South Fifteenth Street  
Kingsley 6-3510

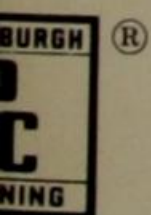
### DETROIT 35, MICHIGAN

63 James Couzens Highway  
UNiversity 4-0154

### TORONTO, ONTARIO, CANADA

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WAlnut 1-1961

## PITTSBURGH CORNING CORPORATION



One Gateway Center  
Pittsburgh 22, Pennsylvania  
COurt 1-2900

Brochure designed by  
Architects Kelly and Kress  
and Associates

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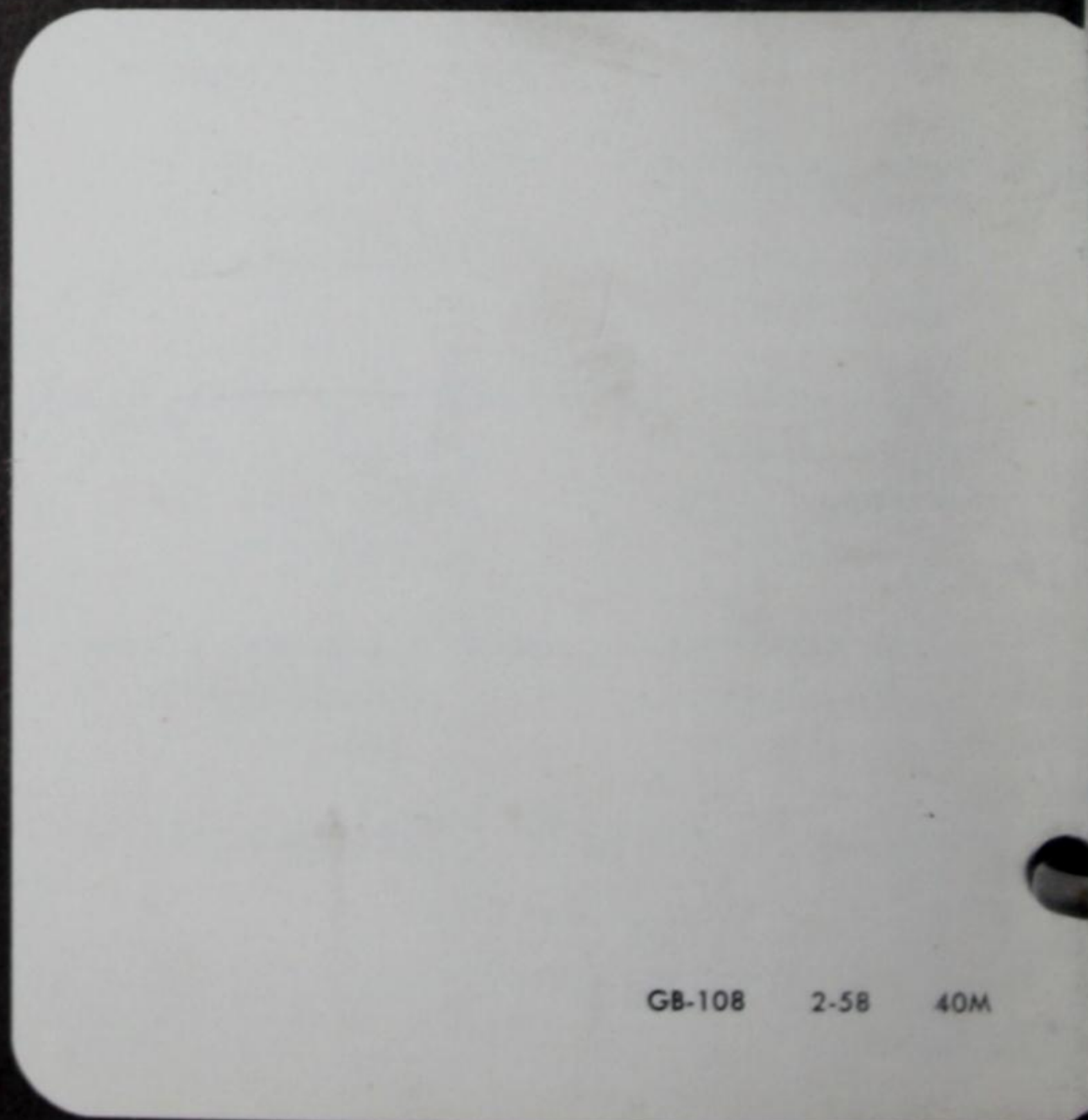
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GLASS BLOCKS

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GB-108 2-58 40M



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# SKYTROL



A.I.A. File No. 12-J

## SKYTROL<sup>®</sup>

### GLASS BLOCKS

for toplighting  
your buildings

PITTSBURGH CORNING CORPORATION

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ONCE UPON A TIME, in the dim, dark past, a primitive man bashed a hole through the roof of his simple hut to let the smoke out. To his everlasting credit, he found that the same hole that let smoke out would let the natural daylight in. Naturally, the rain and dirt came in with it. Ever since that time, man has been trying to find a way to let the light in, but keep out the cold and rain and dust.



Conventional steel-framed skylights were a big step in the right direction. They let the light in. Lots of light. In fact, *too* much light for comfort. When the sun comes up in all its glory, you feel like you're in a frying pan when you sit under an ordinary skylight.

It's almost as bad in the winter. Unless extraordinary precautions are taken, the heat leaks out at an alarming rate. Along with the heat, *fuel* bills go right through the roof.

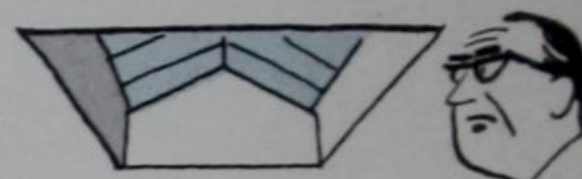


Condensation is always a problem with ordinary skylights. Warm air strikes the cold metal and glass. The moisture in the air condenses and drips down into the room. Rust forms on the metal surfaces. You fight a constant battle of painting, re-puttying and calking.

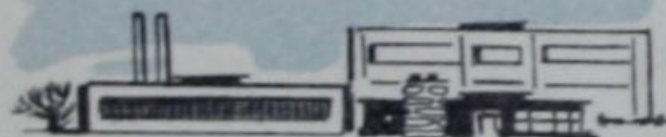
Worst of all, to a design-conscious architect: ordinary skylights are ugly.



Glass blocks have long been under consideration as a toplighting material, but until now, there has never been a satisfactory installation method. Some builders tried supporting ordinary glass blocks in a lattice of wood or metal, using various sealers and adhesives. But the adhesives deteriorated, and sometimes they would soften and stain the surroundings.



A short time ago, Pittsburgh Corning Corporation introduced the PC Skytrol Block, the first glass block especially designed for toplighting. The blocks are cast into a rigid, steel-reinforced concrete grid—a system widely used in Europe for many years. No scraping, puttying or calking is needed. Panels can be flat or curved, and there is no limit on dimensions if proper installation methods are used.



Skytrol Blocks can be used in countless locations in schools, industrial or public buildings and residences. See suggested applications on page 8.



Skytrol Blocks require almost no maintenance. They are self-cleaning and just about impossible to break. They have *twice* the insulating efficiency of ordinary skylights, so they reduce fuel bills and condensation.



Best of all, Skytrol panels only cost about \$4.50 to \$6.50 per sq. ft. *installed*.



As far as daylighting is concerned, Skytrol Blocks are hard to beat. They actually scatter the light rays out into the far corners of the room. The panels do not have to be compass-oriented, and they present a neat, low silhouette on the roof of today's sleek, one-story buildings. Where brightness is an acute problem, a special Suntrol\* version is available with a green screen at the center to reduce brightness.



\*T.M. Reg. Applied for.

This is a Skytrol research room at Pittsburgh Corning. The vertical poles support photocells that transmit simultaneous light readings to the automatic recording center. Notice the completely even, diffused daylight.

Pittsburgh Corning has played an active part in daylighting research ever since the company was formed. A special illuminating laboratory staff works year-round to develop better ways to throw better light on the activities of man.



Mirrors

Patterned  
Glass

Insulating  
Glass

Storefronts

Art Glass

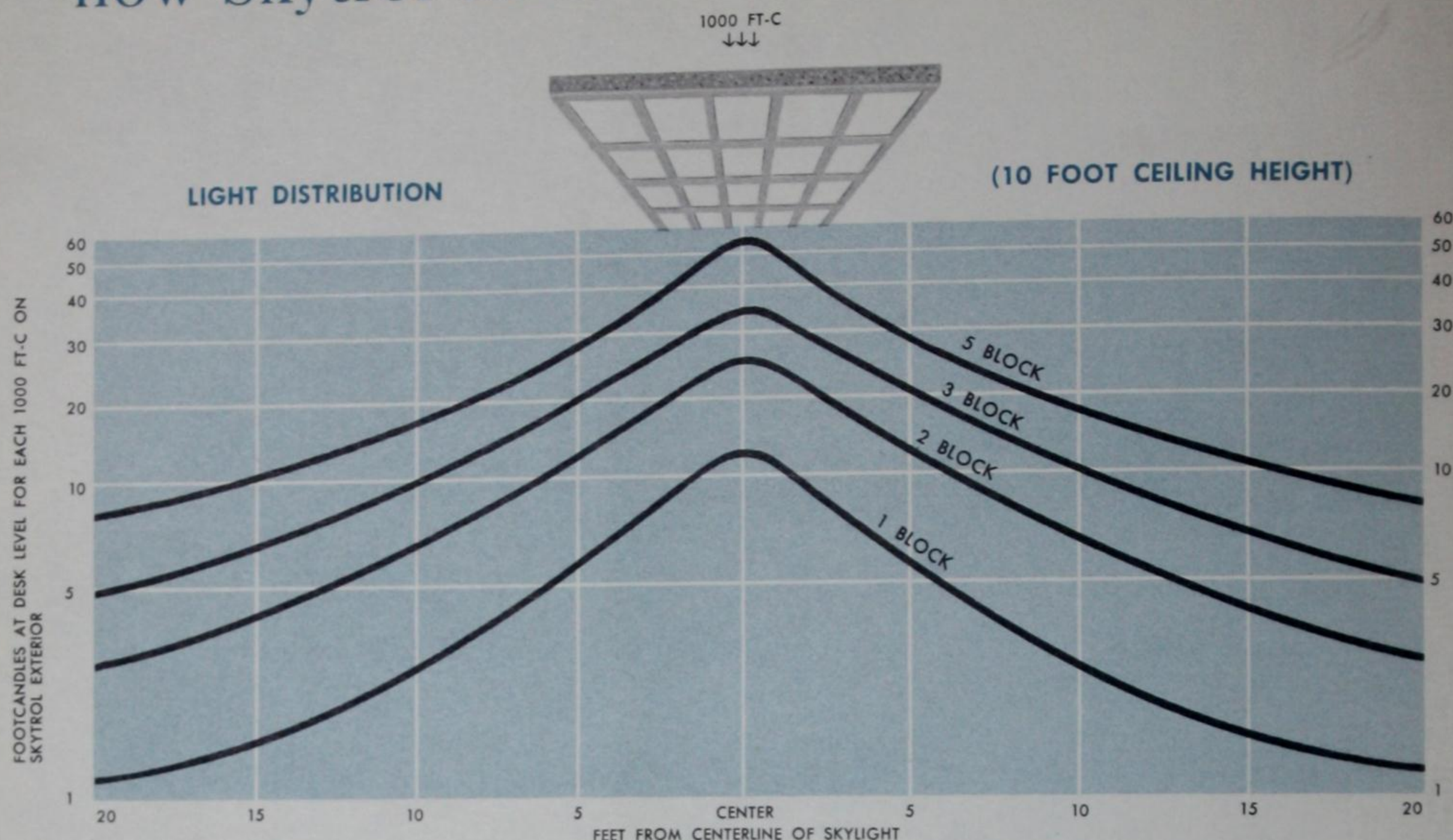
General Glass

Miscellaneous





# how Skytrol Blocks work:

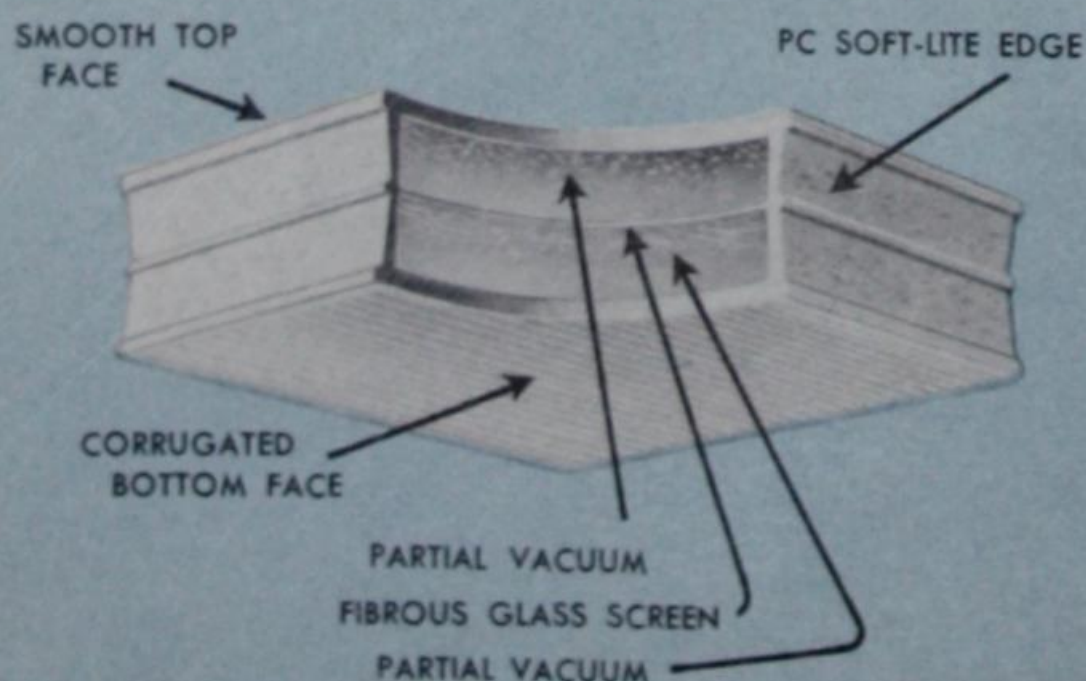
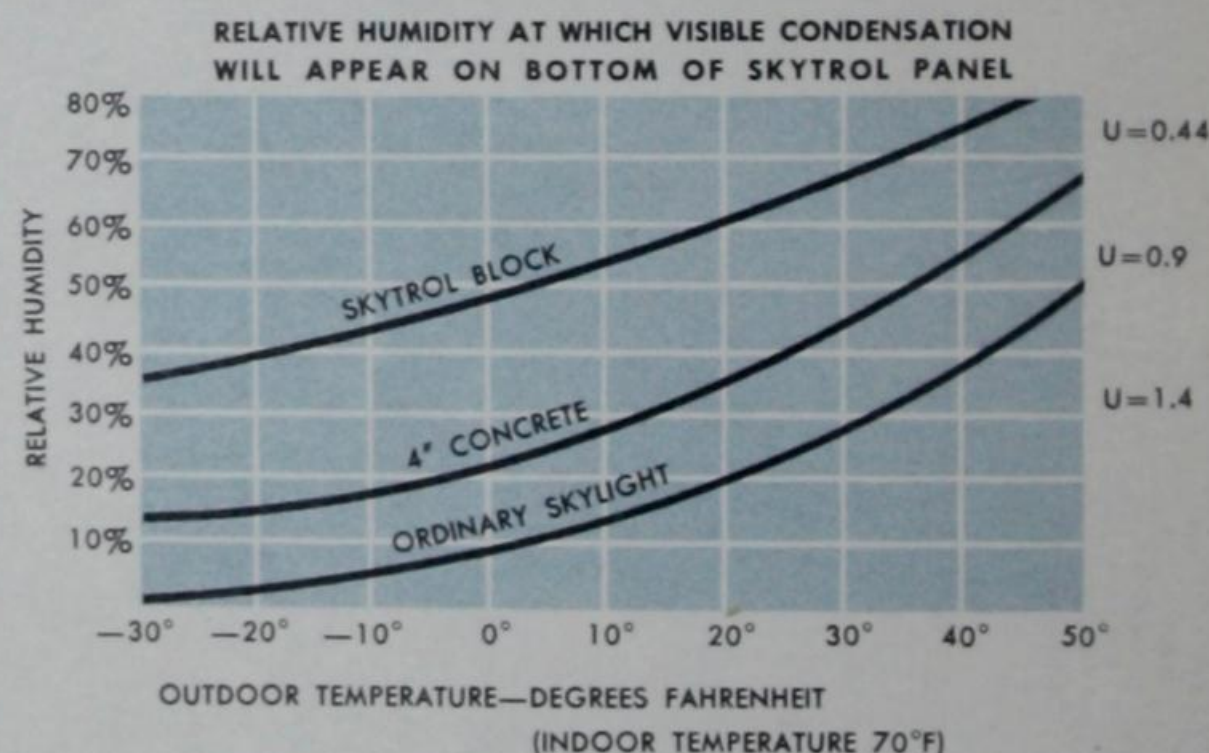


Skytrol Blocks have been specially designed to scatter the light into all parts of the room. In other words, they give far better light distribution than you would get from a bare hole cut in the roof. *In addition*, the light is softened and diffused until it's easy on the eyes.

The chart tells the story. A small 5-block wide Skytrol panel (it can be any length) puts 22 footcandles on a desk top 8 feet from the panel centerline on an average overcast day.

## CONDENSATION AND HEAT LOSS

At normal room humidities, it is almost impossible to make condensation form on the bottom of a Skytrol panel. When you compare Skytrol panels with ordinary skylights, the difference is amazing: Assume a typical room with relative humidity of 38%—interior temperature of 70°F. With an ordinary skylight, condensation will form at 39°F. But on the Skytrol Blocks, condensation will not form until the outside temperature has dropped to 29°F. *below zero!*



## HOW SKYTROL BLOCKS ARE DESIGNED

The top surface of the block is smooth glass—normal rainfall keeps it clean. Inside the block, there exists a partial vacuum that improves the insulation qualities. The fibrous glass diffusing screen divides the interior of the block into two dead air spaces that reduce heat loss or gain. This screen also helps to diffuse the daylight.

Both inner surfaces are stippled. And the edge of each block contains an opal glass insert<sup>®</sup> that reduces edge brightness, resulting in a panel that is easy to look at from any angle. The block measures 11½" x 11½" x 3½".

<sup>®</sup>the PC Soft-Lite<sup>®</sup> Edge.



Mirrors

Patterned  
Glass

Insulating  
Glass

Storefronts

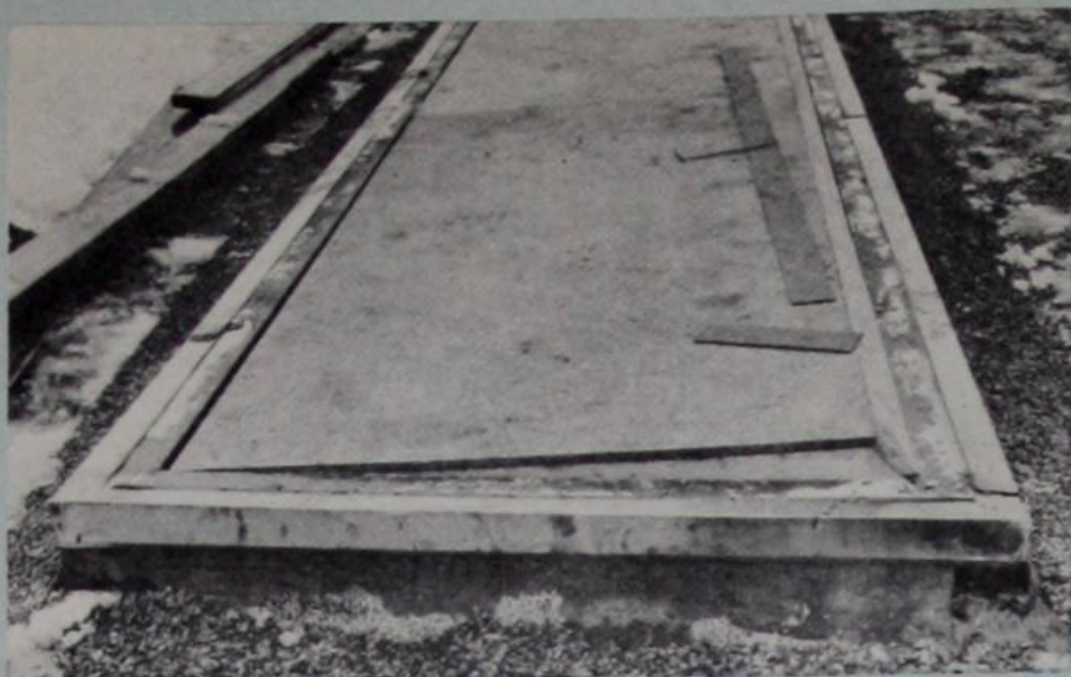
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**1** Here is the form in place on the roof. Plywood base is supported from underneath. Notice curb construction with copper flashing in position. Form is pitched to allow water runoff. This slight slope permits self-cleaning action.

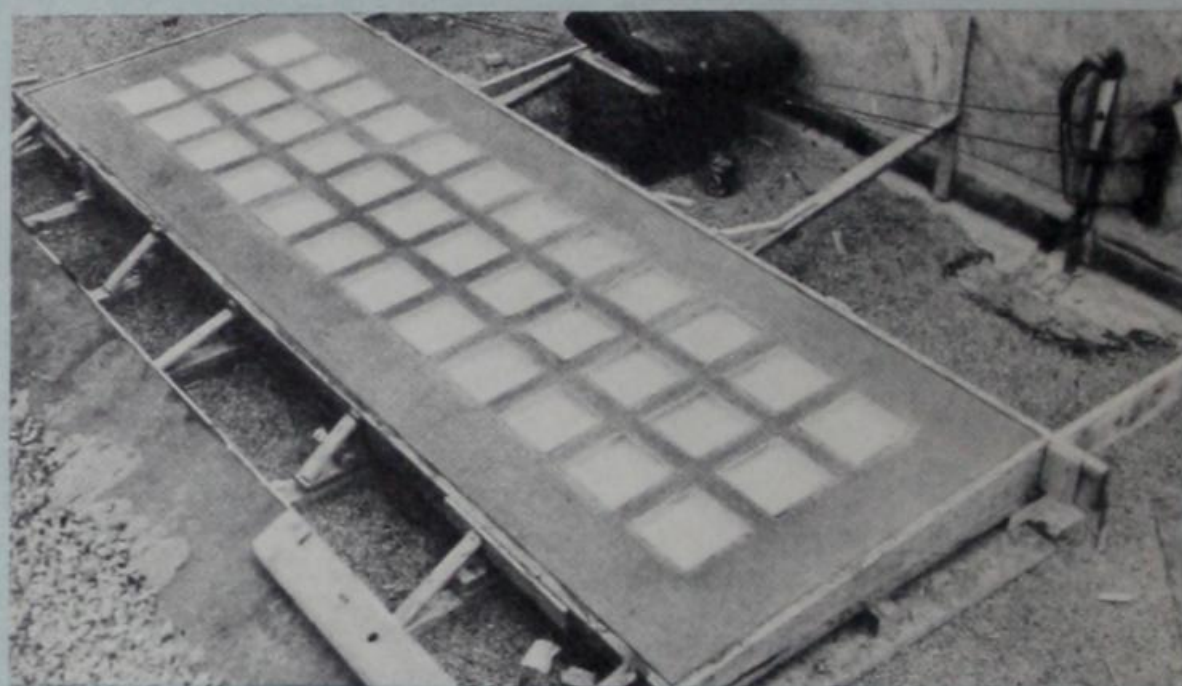


**3** Sandbags are placed on top of blocks to prevent movement. Workman at left is using vibrator to work concrete well into any voids. This is important. After initial set, concrete is troweled and brushed.

## how to install Skytrol Blocks:



**2** Steel reinforcing rods have been wired into place. Notice the small steel "chair" used to elevate rods above form. Hardboard strips fit snugly against blocks to give clean concrete joint. Next comes the concrete.



**4** Top faces of blocks are cleaned before curing. Panel is cured wet for 7 days at temperatures above 50°F. Forms are not removed until concrete has cured for the complete 7 days.

### INSTALLATION HINTS

There are several easy ways to position the glass blocks and reinforcing rods in the form. To space the blocks, cut  $\frac{1}{8}$ " hardboard to the exact width of the joints and nail it to the form. If you cannot get hardboard, hold the blocks in place with two copper nails driven into place along each edge. Use great care not to chip the glass.

Reinforcing rods can be positioned by driving rust-free staples into the form to the proper height. Then wire the rods onto these staples. This holds the rods in a firm grip, but the bottom ends of the staples must be clipped off after the form is removed. The rods may also be placed on small ( $\frac{1}{2}$ " high) concrete blocks. After the form is removed, paint will conceal any small joint marks.

Always paint the bottom of the concrete grid with non-oil white paint. It gives a neater job and lowers the contrast between blocks and grid.

The Specifications (page 7) list aggregate and water ratios for the concrete mix in large quantities. For small mixes, use the following table:

To make a 5½ gallon paste—

Gallons of water per sack of cement if sand is:

Very wet 4¼	Wet (average) 4½	Damp 5	Suggested mixture for trial batch:		
			Cement (sacks)	Aggregates (max. size ¾") (cu. ft.)	
				Fine	Coarse
				2	2

If the mix is not plastic and workable, change the proportions of sand and gravel slightly, but keep the total volume of aggregate the same. Do not add more water.

Steps should be taken to prevent the glass blocks from shifting while the concrete is placed and vibrated. The easiest system is to weight down each block with a small bag of shot or sand.

It is imperative to vibrate each and every joint to insure compaction of the concrete. Vibrate the perimeter and each joint from end to end in both directions.

Small spud vibrators are available from the following companies:

Mall Tool Co., 7740 S. Chicago Ave.  
Chicago 18, Ill.  
Model 1-EV12, 1¼" head,  
electric or pneumatic

Viber Co., 726 S. Flower St., Burbank, Cal.  
Model 11 or 26-10, 1½" head, electric

Dart Mfg. & Sales Co., 1246 Champa St.  
Denver, Colo.  
Model 100EH or 180CPL,  
1½" head, electric or gasoline



# closed specifications for Skytrol construction

**General Conditions:** The "General Conditions" of the contract are a part of these specifications.

**Scope of the Work:** This contractor shall furnish all labor and materials to install all glass blocks where shown on the drawings or specified hereunder. This shall include the furnishing and installation of all expansion joint material, all reinforcing steel, concrete, calking, asphalt emulsion, flashing and other labor, materials and form work necessary for a complete installation. This contract does not include the preparation of the structure to receive the SKYTROL Block panels, such as curbs, stiffeners, etc., except as hereinafter specified.

**Materials:** Glass blocks . . . shall be SKYTROL pattern partially evacuated hollow masonry units of glass,  $11\frac{3}{4}'' \times 11\frac{3}{4}'' \times 3\frac{3}{8}''$  as manufactured by the Pittsburgh Corning Corporation. These units shall be made by fusing together two sections of pressed glass and a fibrous glass cavity-divider, diffusing screen at elevated temperatures. Opal glass shall be fused into the junction. Edge construction shall be such that a "key-lock" concrete joint is formed. Each unit shall be edge-coated with a resilient plastic to improve bond with concrete. Top and bottom faces shall be coated at the factory with a transparent finish to prevent adhesion of concrete and installation scum.

**Asphalt Emulsion:** Where shown or required, shall be PC Asphalt Emulsion as furnished by the Pittsburgh Corning Corporation.

**Expansion Joint Materials:** Where shown or required, shall be premolded cork expansion strips.

**Concrete:** Shall be 1 part portland cement and 4 parts aggregate, measured by volume, plus an integral type waterproofer. If a waterproofer portland cement is used, the integral waterproofer shall be omitted. Water content shall be not more than  $5\frac{1}{2}$  gallons per bag of cement on a dry materials basis. Mixing shall continue for at least two minutes after all materials are in the mixer. Admixtures in the form of setting accelerators or anti-freeze compounds shall not be used. The slump, as measured by standard ASTM Tests, shall be not greater than 3".

**Aggregate:** The fine aggregate shall conform to the standard specifications for concrete aggregates, ASTM Designation C33-52T. To this shall be added  $\frac{3}{8}''$  and below washed gravel in such quantities that the bulk density shall be a maximum. This testing shall be carried out with dry materials.

**Waterproofer:** If used shall be Pittsburgh Corning Corporation NV-3389 (Metallic stearate type). It

shall be added to the concrete at the time of mixing in the proportion of 1 qt. per bag of cement.

**Installation:** Concrete to be worked carefully around glass blocks and reinforcing steel by internal vibration throughout entire panel area to insure compact, void-free joints and perimeter. Neither in-place forms, nor blocks shall be vibrated. After concrete has attained initial set, trowel lightly with both wooden and steel trowel and tap or brush lightly with a soft brush, as final finish. Avoid excessive trowelling.

**Cleaning:** Top face of the glass block shall be cleaned just before applying moisture for curing. Care should be taken to avoid scratching block faces during installation and cleaning.

**Curing:** Concrete is to be cured wet for at least 7 days and at a temperature above  $50^{\circ}\text{F}$ .

**Form Removal:** Forms shall not be removed until seven days after concrete placement.

**Note:** Internal vibration is considered to be the most efficient and trouble-free method of concrete placement. In those cases where a suitable vibrator is unavailable the water content should be increased to six gallons per bag of cement, and the concrete placed by careful tamping, with wooden tools, of multiple layers of concrete.

Fig. 1

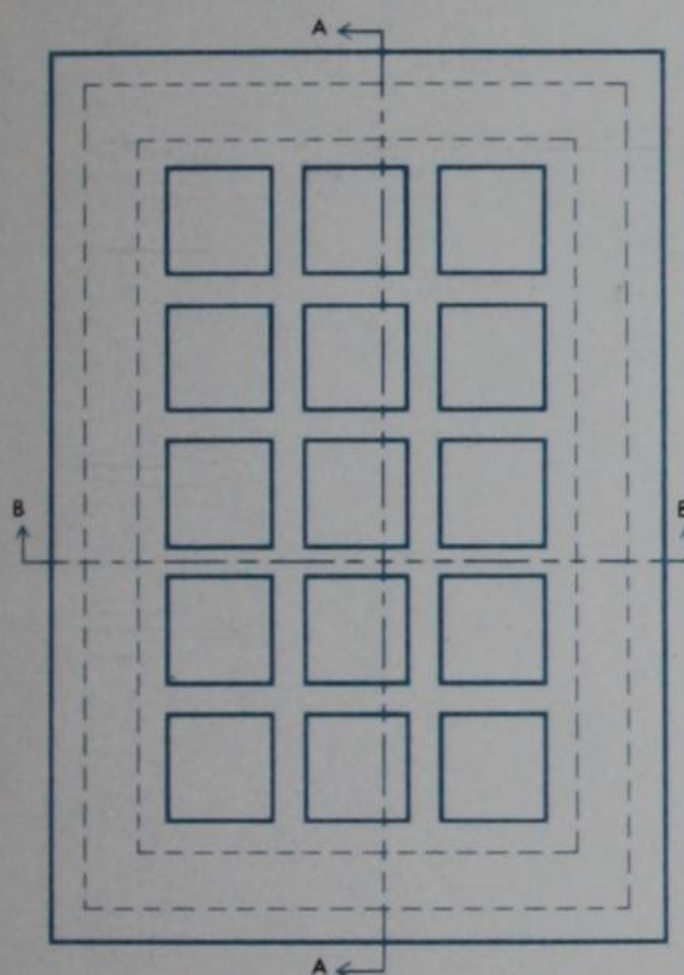
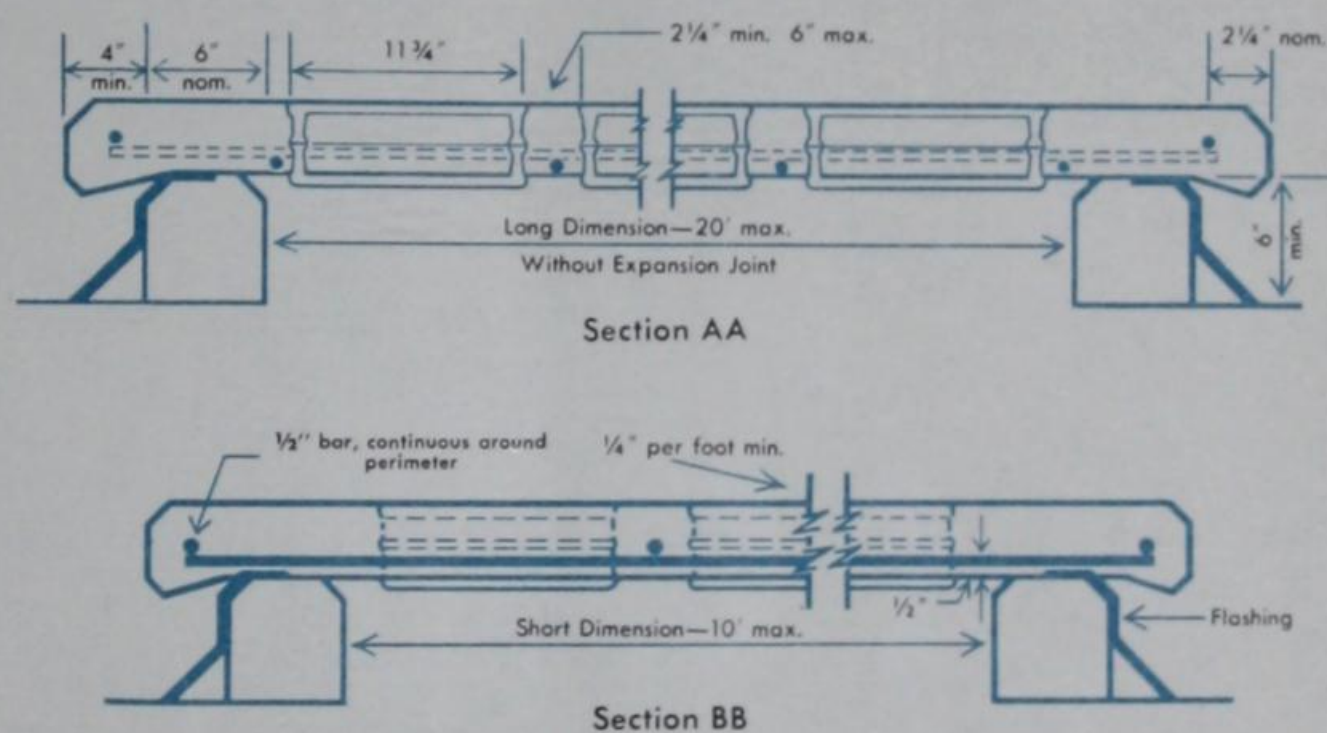


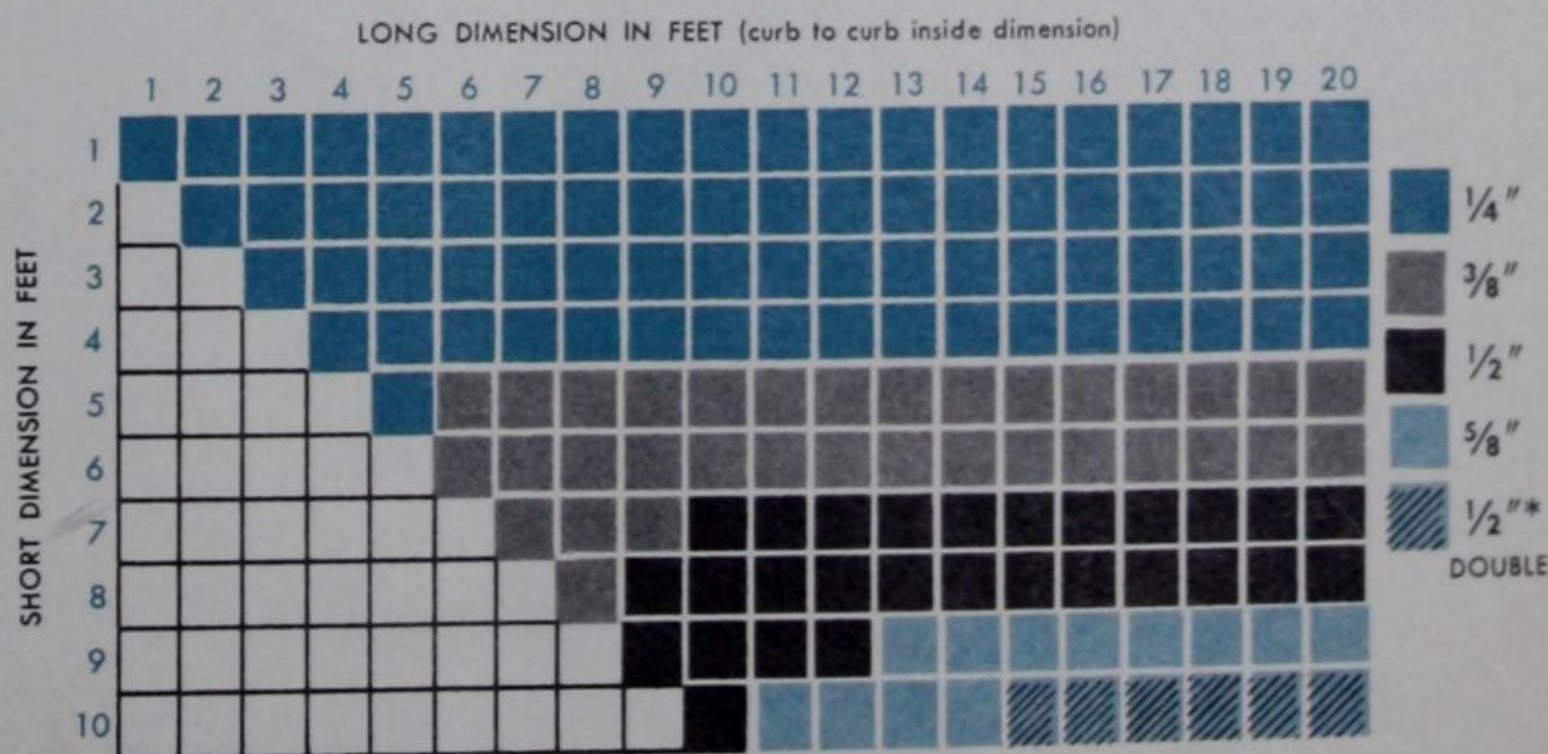
Fig. 4



**Joint Reinforcing:** Unless otherwise specified shall be governed by the following table:

Reinforcing Bar Schedule for all Panel Sizes  
Round, deformed bar sizes in inches to be used in both directions

Fig. 5



\*Indicates deformed bars, top and bottom, of diameter as shown in Fig. 2

The bottom surface of the bars running in the shorter direction shall be positioned not less than  $\frac{1}{2}''$  nor more than  $\frac{3}{8}''$  above the bottom surface of the concrete joint.  
One or more  $\frac{1}{2}''$  diameter deformed bars shall be run continuously around the perimeter of the slab.

Fig. 2

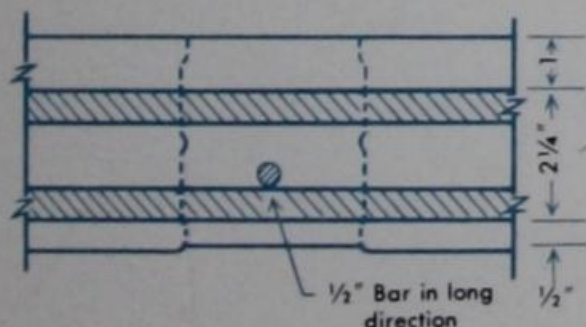
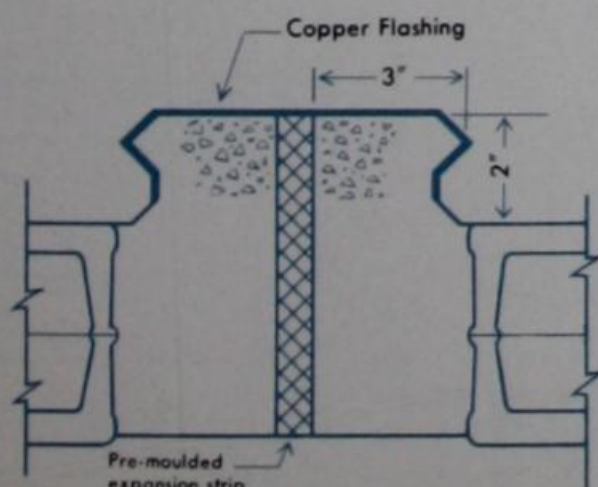
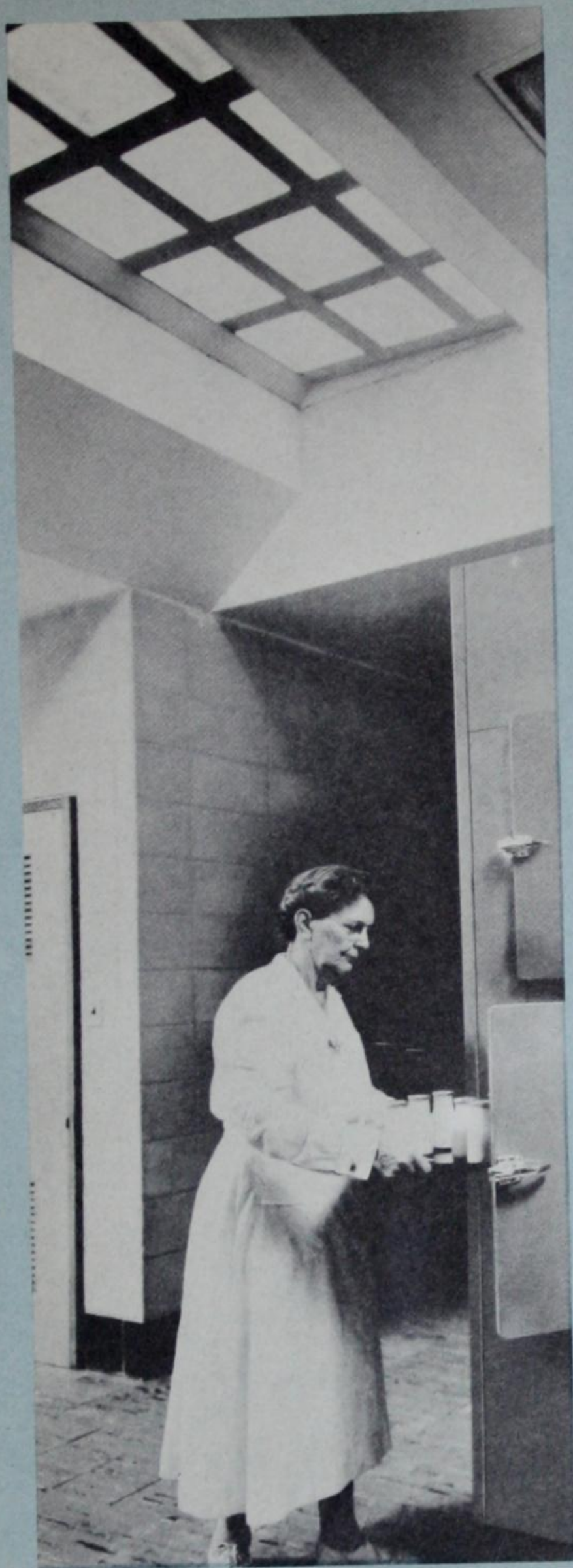


Fig. 3



Expansion Joint Detail for continuous joined panels. Use for panels longer than 20 feet.





use Skytrol Blocks  
*anywhere*

—in schools



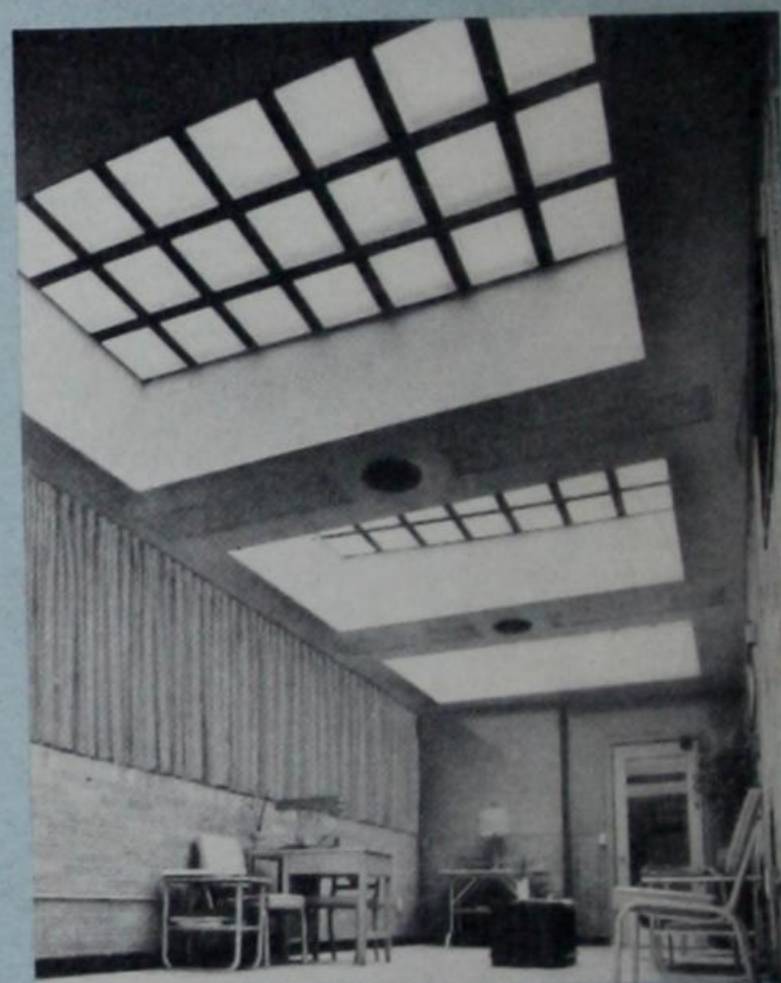
—in offices

—in commercial  
buildings

suggested uses:

classrooms  
cafeterias  
corridors  
swimming pools  
offices  
rest rooms  
libraries  
workshops

operating rooms  
photographic studios  
art studios  
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assembly areas



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BALtimore 7962

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**CANADIAN  
PITTSBURGH  
INDUSTRIES LIMITED**



# Facts by Pilkington about Glass

## FOR ARCHITECTURAL STUDENTS

NO. **25** *Thermopane*\*  
INSULATING UNIT  
(CONTINUED)

\*Registered U.S. Patent Office

In calculating the performance of *Thermopane* where unusual pressures exist, as in the case of exterior glazing of high buildings to withstand high wind velocities, the pane on the pressure side may be examined for strength by the formula:

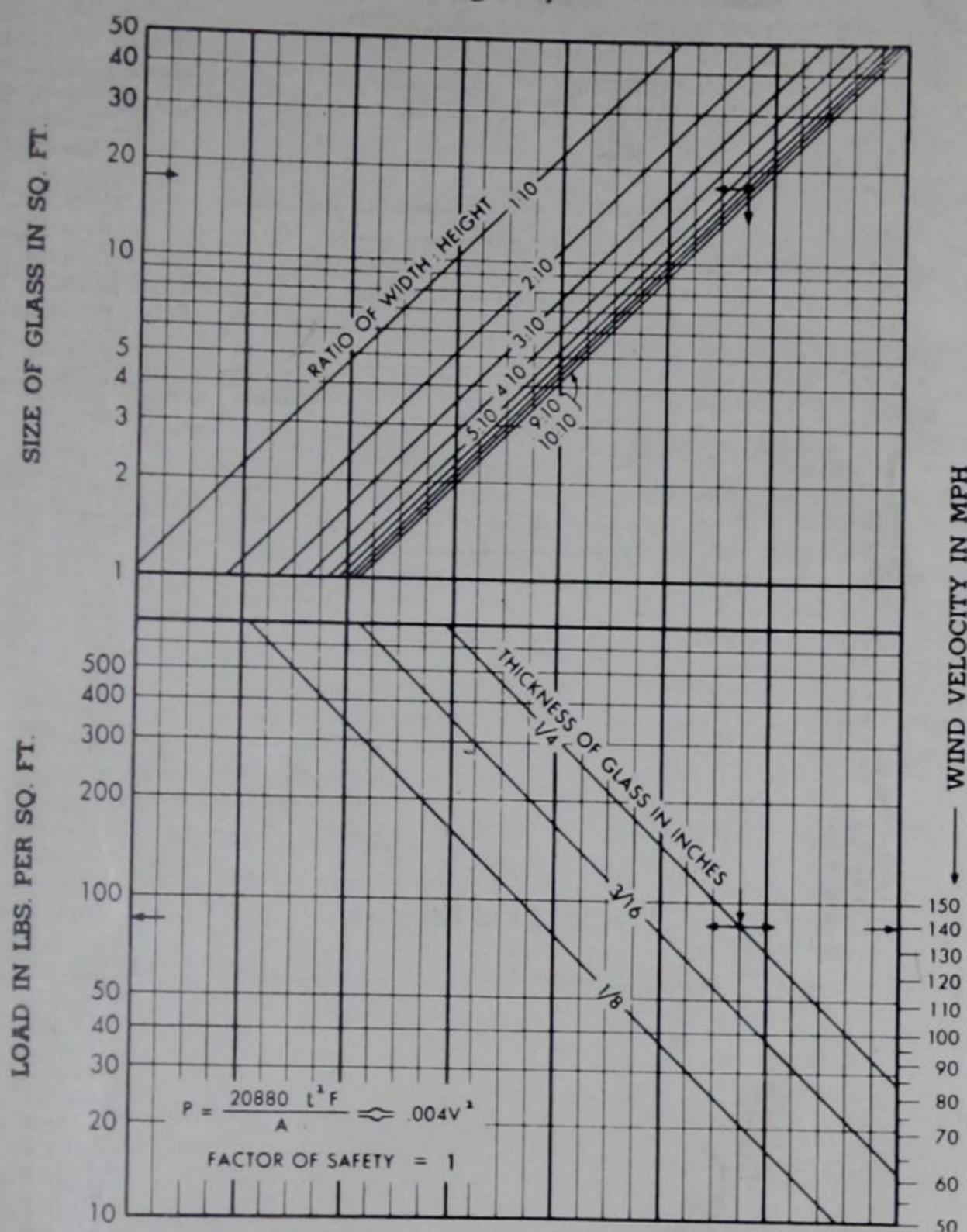


FIGURE 6

### BASIS OF CALCULATING WIND LOAD ON THERMOPANE

Since *Thermopane* is a hermetically sealed unit the air in the air space is free to expand and contract to some extent with changes in temperature and exterior pressures. In large *Thermopane* units, under conditions when both glasses are convex or bowed out from the air space, part of the exterior wind load would be directly transmitted to the inboard glass and the inboard glass would be expected to lend some support. However, when atmospheric conditions cause both glasses to be concave or bowed into the air space, the addition of wind load on the outside glass would cause it to deflect further and the pressure thus added to the inboard light would cause it to flatten, at which time it would not be lending any appreciable support to the outboard glass. Thus at regular intervals conditions can exist where the outboard light must assume practically the entire wind load and the wind load resistance of large size *Thermopane* should, therefore, be calculated on the strength of the outboard glass with little, if any, allowance for the variable support from the inboard glass.

$$PA = 3.48 M t^3 F$$

If the modulus of rupture (M) for standard glass is taken at 6000 pounds per square inch, this formula becomes:

$$P = \frac{20880 t^3 F}{A}$$

in which

- P = the pressure in pounds per square foot
- t = the thickness in inches
- A = the area in square feet
- F = the factor for ratio of width to height of the pane
- S = safety factor (1 to 10)

Ratio Width-Height	Factor (F)
10:10 (Square)	1.000
9:10	1.005
8:10	1.02
7:10	1.07
6:10	1.14
5:10	1.25
4:10	1.45
3:10	1.8
2:10	2.6
1:10	5.0

The wind velocities in miles per hour (V) which are equivalent to given pressures in pounds per square foot may be found from the formula

$$\text{PRESSURE} = 0.004V^2$$

The chart (Fig. 6) gives the strengths of standard plate glass for various thicknesses, width-height ratios.

As an example of the use of this chart, suppose we wish to design a *Thermopane* panel of 17.5 square feet with a width to height ratio of 7:10 (5.0 feet wide by 3.5 feet high). Read across the upper part of the chart from the 17.5 square foot size of glass to the diagonal line 7:10 for the ratio of width to height. At this intersection read down to the lower diagonal lines for the thickness of glass. The intersection with the diagonal line shows that a 1/4" thickness will stand 78 pounds per square foot on the left hand scale. Reading to the right from this intersection we find this is equivalent to 140 mph wind velocity.

NOTE: A factor of safety of 1 has been included in Fig. 6. The appropriate factor of safety to be used is a matter of engineering judgment and should be governed by the individual application. If the application involves a substantial hazard, a safety factor of 5 to 10 is recommended. The decision should be made at the discretion of the architect or engineer.

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**HOBBS GLASS LIMITED**  
57 YORK STREET, LONDON, ONTARIO, METCALF 2803

Something new has been—no, not added exactly, more like —“perfected” in glass blocks.

This development is as radical as the advent of the glass seal ten years or so ago . . .

#### THE SOFT-LITE EDGE

PC Prism Blocks and PC Essex Blocks are now available with this new light diffusing edge which cuts out harmful edge glitter and brightness-contrast.

The attached booklet tells the whole story of the new Soft-Lite Blocks and the additional refinements of design. For architects in school, institutional or industrial work, these new Pittsburgh-Corning Glass Blocks present a splendid opportunity for better light control and . . .

#### THEY DON'T COST A CENT MORE

A very complete booklet dealing with the technical aspects of daylighting with Glass Blocks, brightness-contrast, etc., can be had in addition to the attached.

If you are interested and would like the new “DAYLIGHT” book, drop the enclosed card in the mail.

Very truly yours,

HOBBS GLASS LIMITED

A handwritten signature in black ink that reads "Walter R. Packman".

Manager,  
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W. R. Packman/s  
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Something new has been - not added exactly, more like  
perfectly in glass blocks.

This development is as radical as the advent of the glass  
and ten years or so ago.

### THE CORNER EDGE

PC Glass blocks and PC Glass blocks are now available with  
this new light diffusing edge which cuts out harmful glare  
and brightens contrast.

The attached booklet is the whole story of the new PC  
Glass blocks and the technical advantages of PC Glass  
blocks in school, hospital or industrial work, where new  
Pittsburgh-Corning Glass blocks mean a splendid opportunity  
for better light control.

### THEY DON'T COST A CENT MORE

A very complete booklet dealing with the technical aspects  
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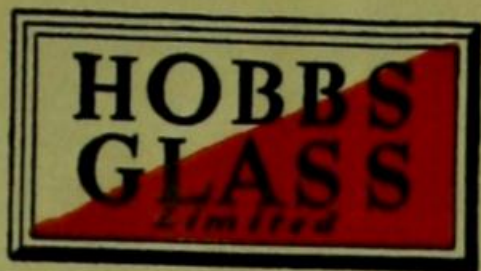
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# PC Glass Blocks

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*Announcing*

. . . the newly-designed glass block,

## PC SOFT-LITE PRISM B

—an important improvement in light control on sunlit exposures



PC Glass Blocks—The Mark of a Modern Building

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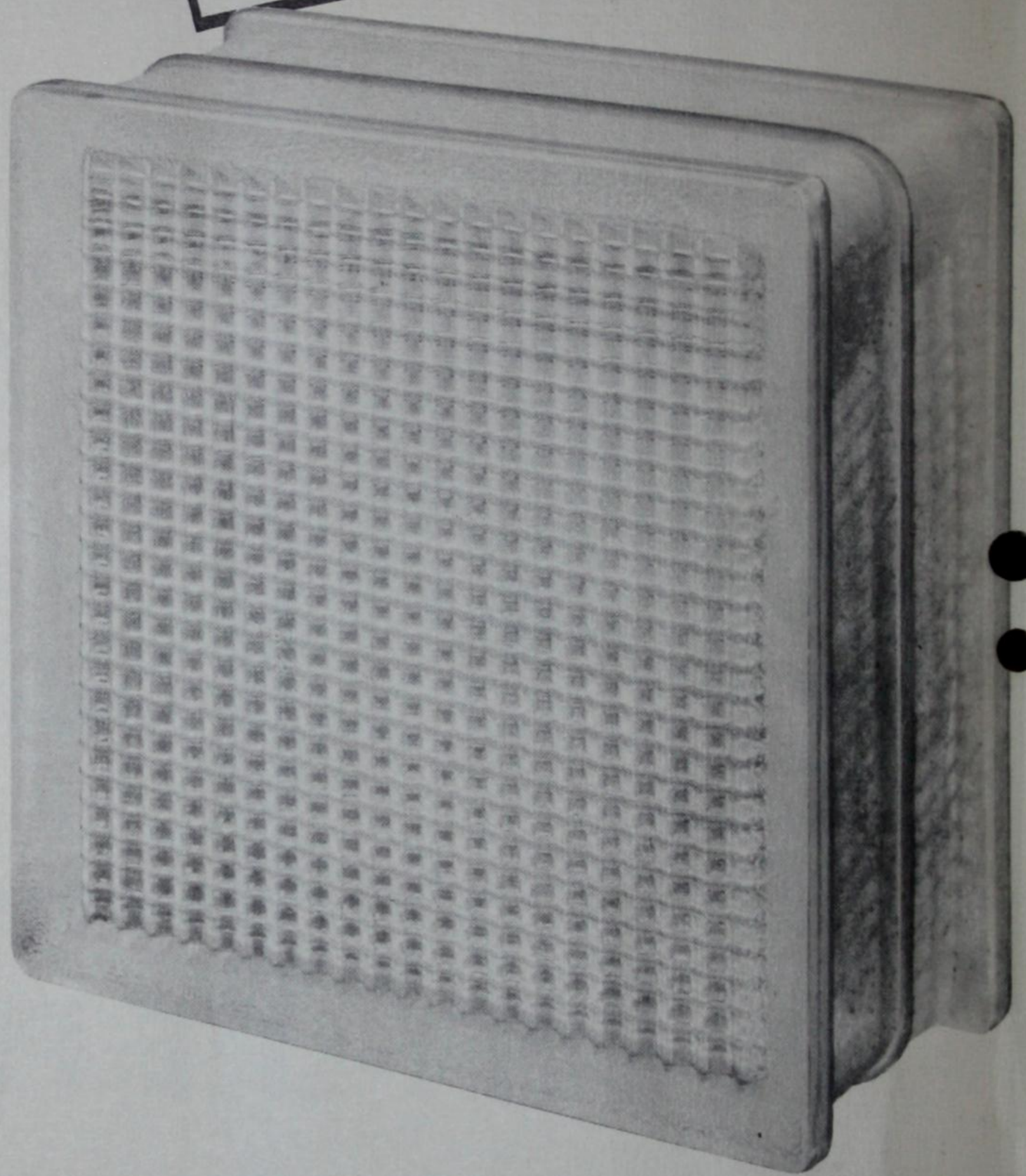


# For better control of THE REVOLUTIONARY NEW PC

Another *first* For

The long established leadership of Pittsburgh Corning Corporation in technical research in the glass block industry is being maintained by the introduction of our latest improvement in design and construction, the new PC Soft-Lite Prism B Glass Block.

Pittsburgh Corning was first to introduce the glass-to-glass seal, which made glass blocks a completely practical building material; first to eliminate light color changes by using water-white glass; first to introduce the general vision block (Vue pattern) still unequalled in its field; first to use a fibrous glass diffusing and insulating screen (LX-75 patterns); and now—after years of development work and test installations in different parts of the country—first to offer you the unique advantages embodied in PC Soft-Lite Prism B Glass Blocks.



ITS DISTINCTIVE FACE PATTERN makes the PC Soft-Lite Prism B Glass Block a thing of beauty as well as utility. In panels of all sizes and shapes, these blocks lend a new attractive note to the outer appearance of all sorts of buildings, harmonize with all types of architecture. PC Soft-Lite Prism B Glass Blocks embody all the familiar advantages of other PC patterns—excellent insulating properties, freedom from repairs and replacement, quick and easy cleaning—plus the unique ability to distribute softly diffused daylight over large areas on sun exposures.

## PC GLASS BLOCKS...



daylight on sun exposures—

# SOFT-LITE PRISM B GLASS BLOCK

**Pittsburgh Corning**

## Meets Daylighting Needs

Lighting engineers have long recognized the need for an improved means of daylighting classrooms, large offices, factories and department stores where the light, coming from openings exposed to sunlight, must be softly diffused and evenly distributed over large areas. They felt the need also to minimize brightness contrasts in task areas and to eliminate excess brightness contrasts on room-side surfaces of glass blocks.

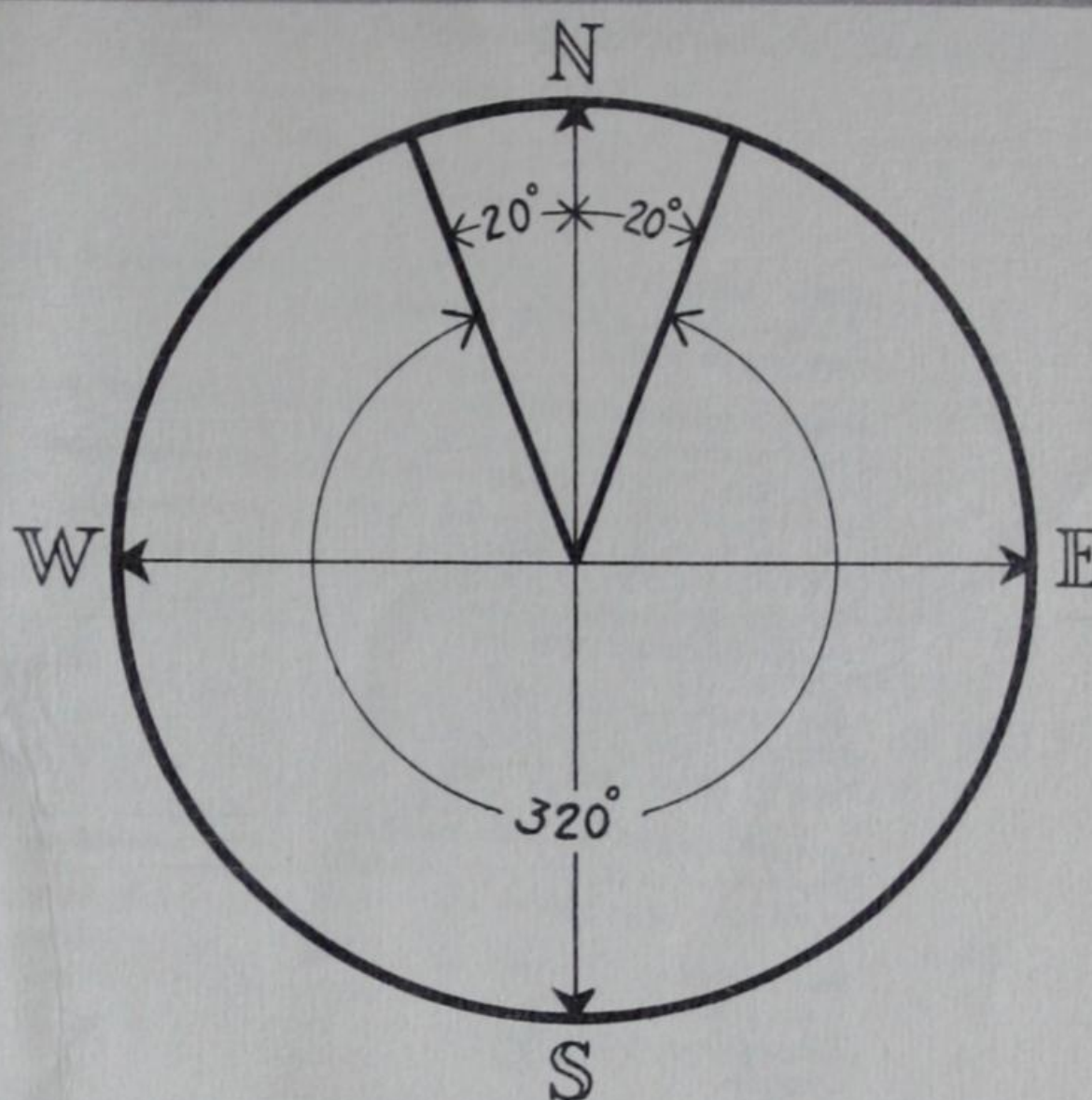
Under like conditions, the newly designed PC Soft-Lite Prism B Glass Blocks diffuse and refract incident daylight—including direct sunlight—over a greater area of reflecting ceiling, whence it is distributed more evenly over larger areas. The result is, more usable light in the right places.

## New Prisms — New Soft-Lite Edge

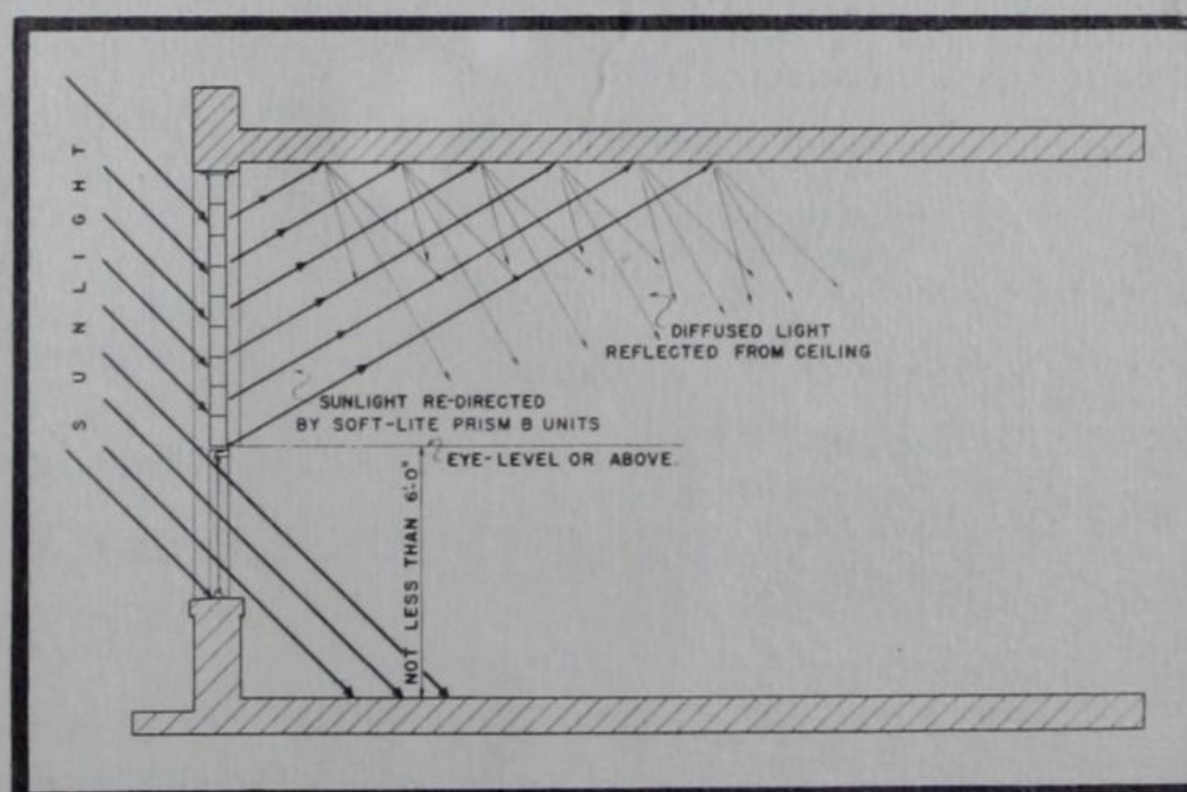
The lighting problems on East, South and West exposures include admittance of sufficient daylight without excess brightness, even on sunny days. This is accomplished—with PC Soft-Lite Prism B Glass Blocks—by a unique combination of interior prisms and the new Soft-Lite edge.

The prisms diffuse and direct the light to the reflecting ceiling whence it is distributed evenly over task areas. The Soft-Lite edge minimizes brightness contrasts between mortar joints, block edges and the remainder of the block face. In fact the new Soft-Lite edge transmits just enough light to provide a comfortable transition between the lighter block surface and the darker mortar joint.

If lighting rooms of all sizes in your buildings presents unusual problems, our lighting engineers will be glad to consult with you, to determine where and why you should use functional PC Glass Blocks to the best advantage. Also, we have recently published booklets—which give full information on the use of PC Glass Blocks in industrial, commercial and public buildings—which we shall be glad to mail to you without obligation. Just write to Pittsburgh Corning Corporation, Room 703-8, 632 Duquesne Way, Pittsburgh 22, Pa.



EAST, SOUTH, AND WEST EXPOSURES—comprising 320° of the compass—receive direct sunlight during certain hours of the day and seasons of the year. This chart illustrates this wide range of exposures where PC Soft-Lite Prism B Glass Blocks should be used to provide softly diffused, evenly distributed daylight without excess brightness contrast. The 20° exposures on each side of true North are practically never exposed to the sun's rays—hence, do not present such an exacting lighting problem.



This diagram shows typical light paths into a room from a panel of PC Soft-Lite Prism B Glass Blocks. Incident daylight is diverted to a wide area of reflecting ceiling, whence it is distributed evenly over large areas.

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# In addition to their special light-controlling properties PC SOFT-LITE PRISM B GLASS BLOCKS

embody all these well-known advantages of other PC patterns

**Better Lighting.** PC Glass Blocks provide an abundance of clear, diffused daylight without color change. Larger light openings and continuous panels admit more daylight and distribute it over larger areas.

**Better Insulation.** PC Glass Blocks have more than twice the insulating value of ordinary windows. Each block contains a hollow, sealed-in air space that is an effective heat retardant, so panels of PC Glass Blocks consist of many insulating units, thus help maintain temperatures at desired levels and reduce heating costs.

The insulating properties of PC Glass Blocks also eliminate waste space due to cold spots, chilling drafts and down draft near windows, which interfere with machine operation and make people uncomfortable.

**Less Condensation.** The use of PC Glass Blocks often proves advantageous where surface condensation on windows is a problem. For moisture does not condense on the warm side of PC Glass Blocks except under extreme conditions of temperature and humidity.

**Less Infiltration of Dust and Grit.** Harmful dust and grit cannot filter through panels of PC Glass Blocks. Dangerous or offensive gases, smoke and soot, also are excluded, preventing damage to delicate machinery and goods in process.

**More Privacy.** Since PC Glass Blocks are translucent—but not transparent (except the Vue pattern)—they admit plenty of diffused daylight, but still preserve privacy. They cut off unsightly and distracting views, tend to confine inside noises and to exclude distracting sounds which originate outside.

**Better Air Conditioning.** The insulating properties of PC Glass Blocks assure less heat loss in winter, less heat gain in summer. Solar heat transmission and radiation are reduced. All of which results in actual money savings and less wear and tear on heating and air-conditioning equipment.

**Easier Cleaning.** Large panels of PC Glass Blocks can be cleaned as single units. There are no small panes or muntins, so the smooth glass surface can be covered in one sweep. Translucent panels of PC Glass Blocks look clean long after ordinary windows would look streaked and spotty.

**Lower Maintenance Cost.** With PC Glass Blocks there is no window sash to check, rot or rust, to need replacement or repainting. There are no fragile panes of glass to need frequent replacement. The blocks are not easily marred or broken. If replacement of a single block should become necessary, it can be done easily by any mason.

**Easier Installation.** Masons find PC Glass Blocks easy to lay. Their edge construction forms a "key-lock" mortar joint, providing a full bed of mortar, yet permitting a visible joint of only about  $\frac{1}{4}$  inch, resulting in a trim panel that is pleasing to the eye. The "key-lock" joint is also easier to handle in laying.

*For further information or any technical data you need, write to Pittsburgh Corning Corporation,  
632 Duquesne Way, Pittsburgh 22, Pa. Also makers of PC Foamglas Insulation.*

Manufactured by

**PITTSBURGH CORNING CORPORATION**

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**PITTSBURGH PLATE GLASS COMPANY**

by W. P. Fuller & Co. on the Pacific Coast  
and by Hobbs Glass Ltd. in Canada





## HOBBS GLASS LIMITED

London, Ontario.  
August 9th, 1948.

Mr. Ernest Cormier, Architect,  
3675 Cote des Neiges,  
MONTREAL, Quebec.

Dear Sirs:

Prices are going down!

This is probably the most important news (and the most unusual!) about glass blocks at present. In many parts of Canada surprising price reductions have already taken place in the glass block picture. Installed Glass Block can compete favourably with metal sash if you consider installation, glazing, painting and later maintenance.

You will profit by checking glass block prices with your nearest Hobbs representative.

Other glass block news is the recent addition of your old friend the LX-75, glass fibre mat, anti-glare block. This favourite of architects, a war casualty, has returned in the Bristol and Druid patterns.

Vue blocks, also out for the war period are now once again available. Many architects like to specify bands of this absolutely clear block for vision purposes in walls of light-control blocks.

Folders covering the new LX-75 and Glass Blocks are enclosed. These are punched for insertion in your regular architectural service binder "Glass in Architecture".

Also included is the new Twindow folder which announces three new standard sizes in Twindow, 24" x 48", 60" x 60" and 72" x 84". These sizes are in addition to the regular existing standard sizes. Please destroy any previous information you may have on Twindow.

Yours very truly,

HOBBS GLASS LIMITED

*Walter R. Packman*

Walter R. Packman,  
Manager, Architectural Sales.

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## HOBBS ARCHITECTURAL RELATIONS DEPARTMENT

SCARCELY A WEEK passes when research does not produce some new type of architectural beauty in GLASS. These advances later express themselves in a stream of proven new products emerging from modern glass plants.

All too often, however, whereas these developments are written up in publicity style for leading magazines, definite information and samples fail to reach the architect.

To bridge this gap, Hobbs Glass Ltd., sponsor an Architectural Relations Dept. This division has as its aim the distribution to you of tested information on the latest developments in glass. To aid you in classifying and using the material easily this loose-leaf binder is provided.

A further endeavour of our service to architects is to render reliable information on special glass problems not covered by our regular material. On the majority of these problems our own technical staff will be competent to advise, but where you may have a situation requiring data of a highly complex nature, arrangements have been made to tie in with the technical departments of the world's largest glass manufacturers, both on this continent and in Europe.

It is our hope that this Hobbs Department will be of real service to the architect.

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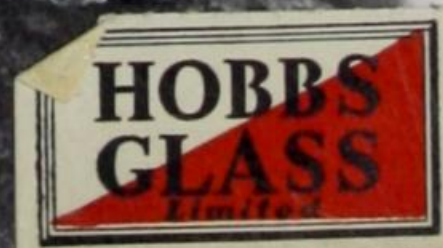
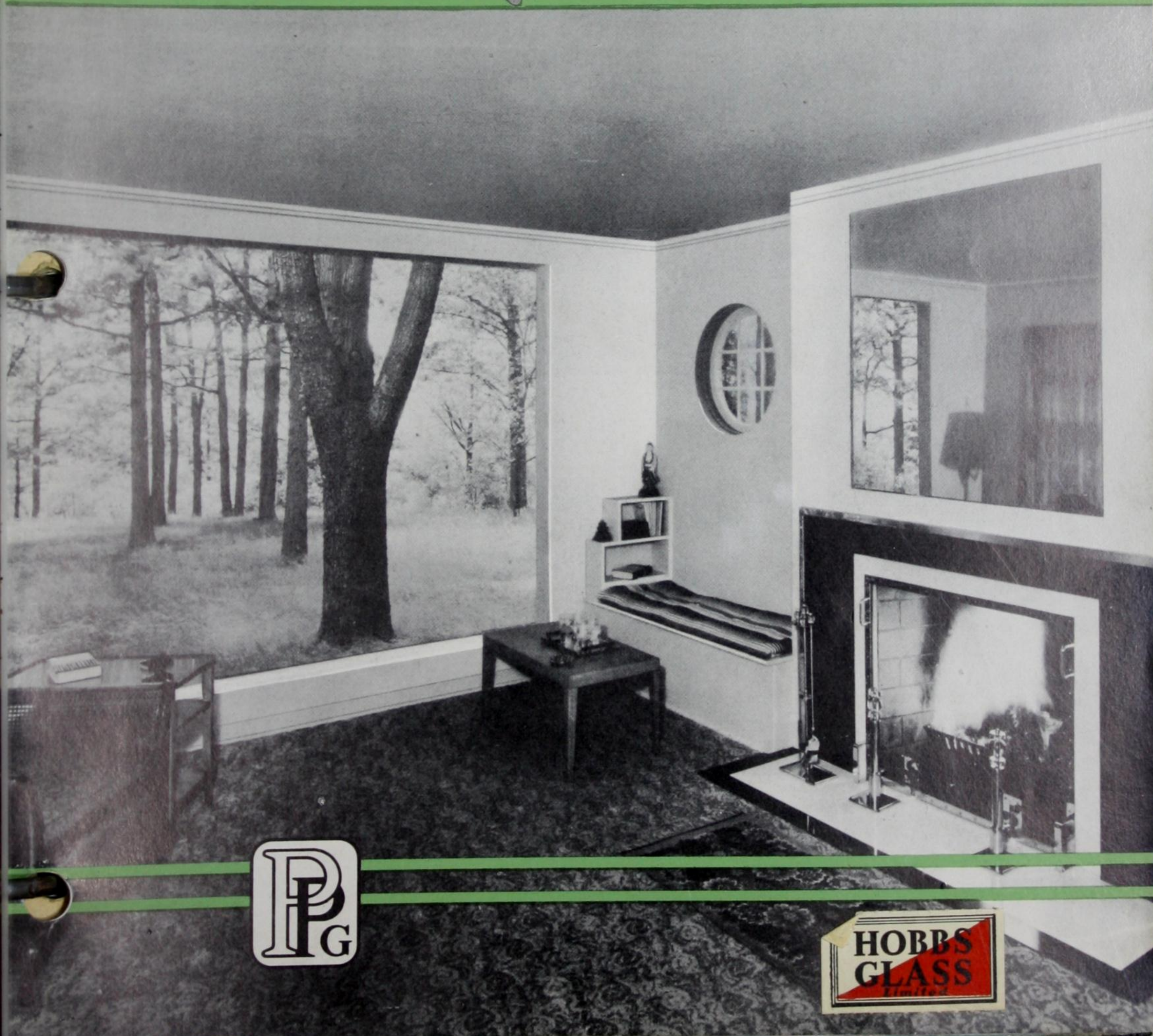
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WHATEVER THE STYLE OF YOUR HOME

A LITTLE EXTRA

# Glass

MEANS A LOT OF EXTRA CHARM

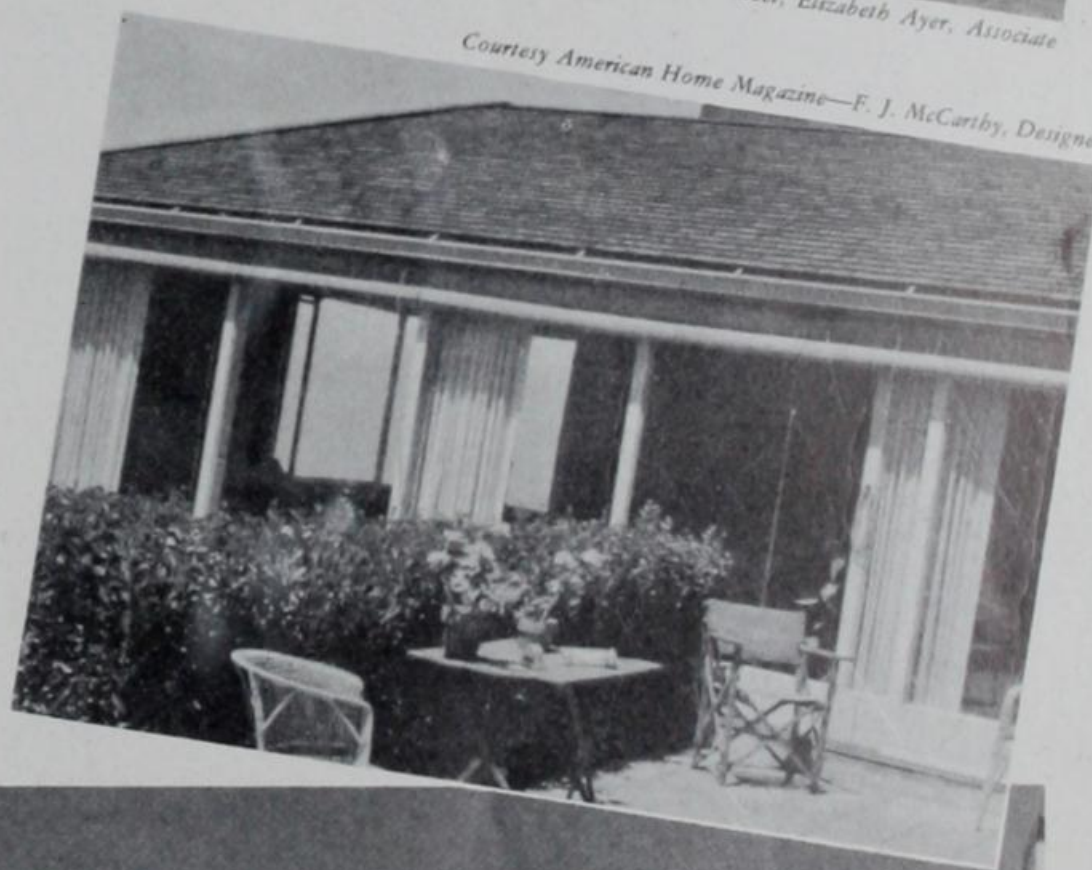
IN building a new home, in remodeling, in furnishing, and in decorating, Glass offers unlimited possibilities for making your home more attractive.

Pittsburgh Glass comes in a variety of types and forms that will lend themselves to many applications—that give a home a touch of smartness, style, and charm. Pittsburgh Glass is gay and glamorous, yet permanent and completely practical.

The difference in beauty and livability that a little extra glass makes in a house is tremendous. You will see in this booklet a few of the many ways in which glass can be used effectively and inexpensively to brighten your home and contribute to gracious living.



Courtesy Architectural Forum—Edwin J. Ivey, Architect; Elizabeth Ayer, Associate



Courtesy American Home Magazine—F. J. McCarthy, Designer



Courtesy Architectural Forum—Photographed by Hedrich-Blessing; Burnham Hoyt, Architect.



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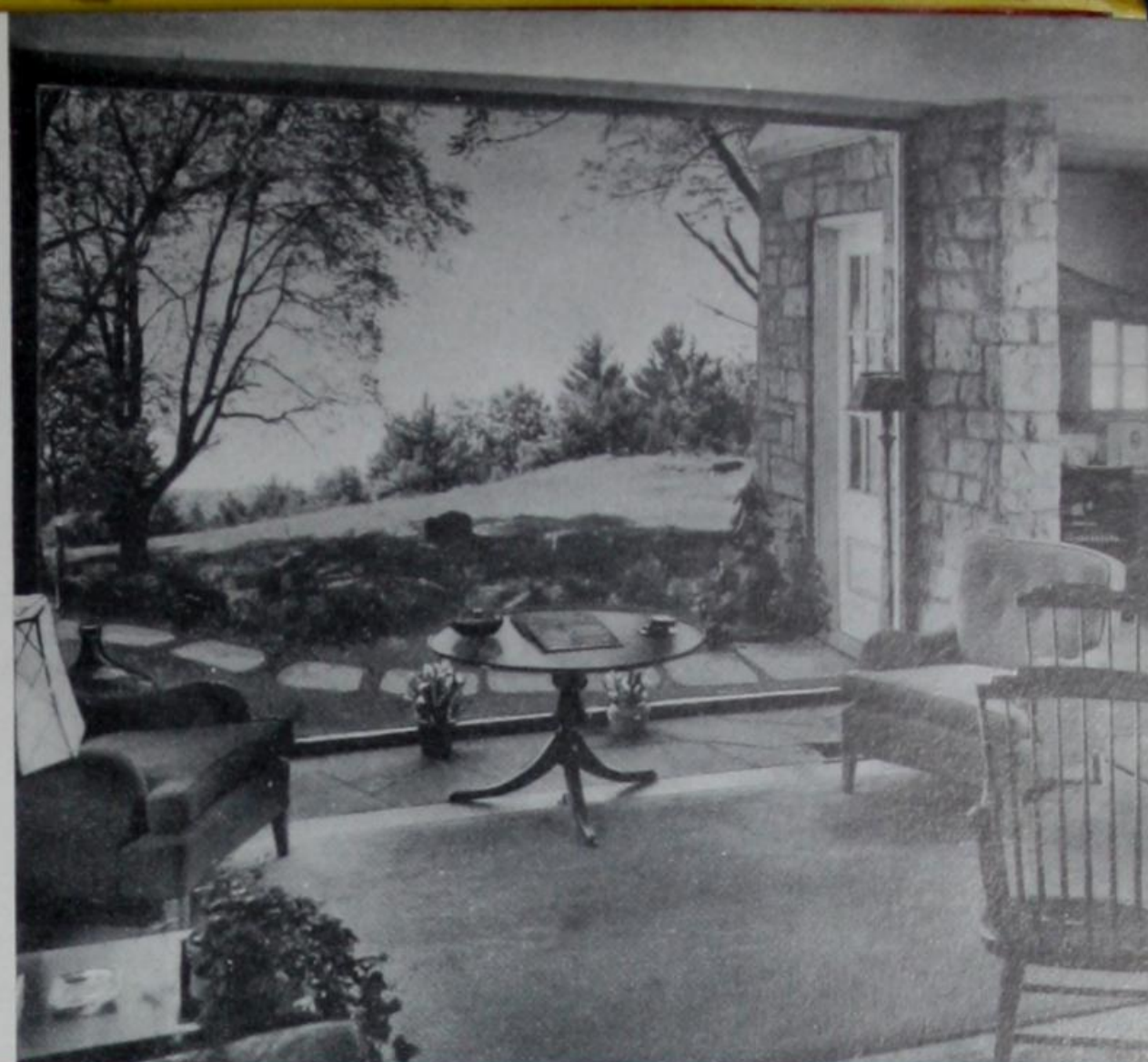








IT'S EASY to wake up your living room. Hang a mantel mirror\* above the fireplace and reflect the beauty of your home. Color, furnishings, and you—all are reflected in a lovely Plate Glass mirror like this.



THE VIEW becomes part of the room that boasts a large picture window. Daylight enters—makes the room cheery and bright. Who wouldn't like to sit in front of this window and enjoy the countryside!

# Glass

**MAKES LIVING ROOMS  
LIGHTER AND LOVELIER . . .**

*\*These products are available at your favorite department or furniture store.*

*Photographs at left and below courtesy American Home Magazine*

THERE'S NO BETTER WAY to make a room appear larger than by using mirrors. The structural Plate Glass mirrors used here make the room seem twice as wide—and twice as attractive.

ABOVE THE SOFA—a lovely, unframed mirror\* to enhance the beauty of your room, to set-off the sofa, to make a charming spot that is the focal point of the room. Mirrors can be used in scores of places to add beauty to your home.



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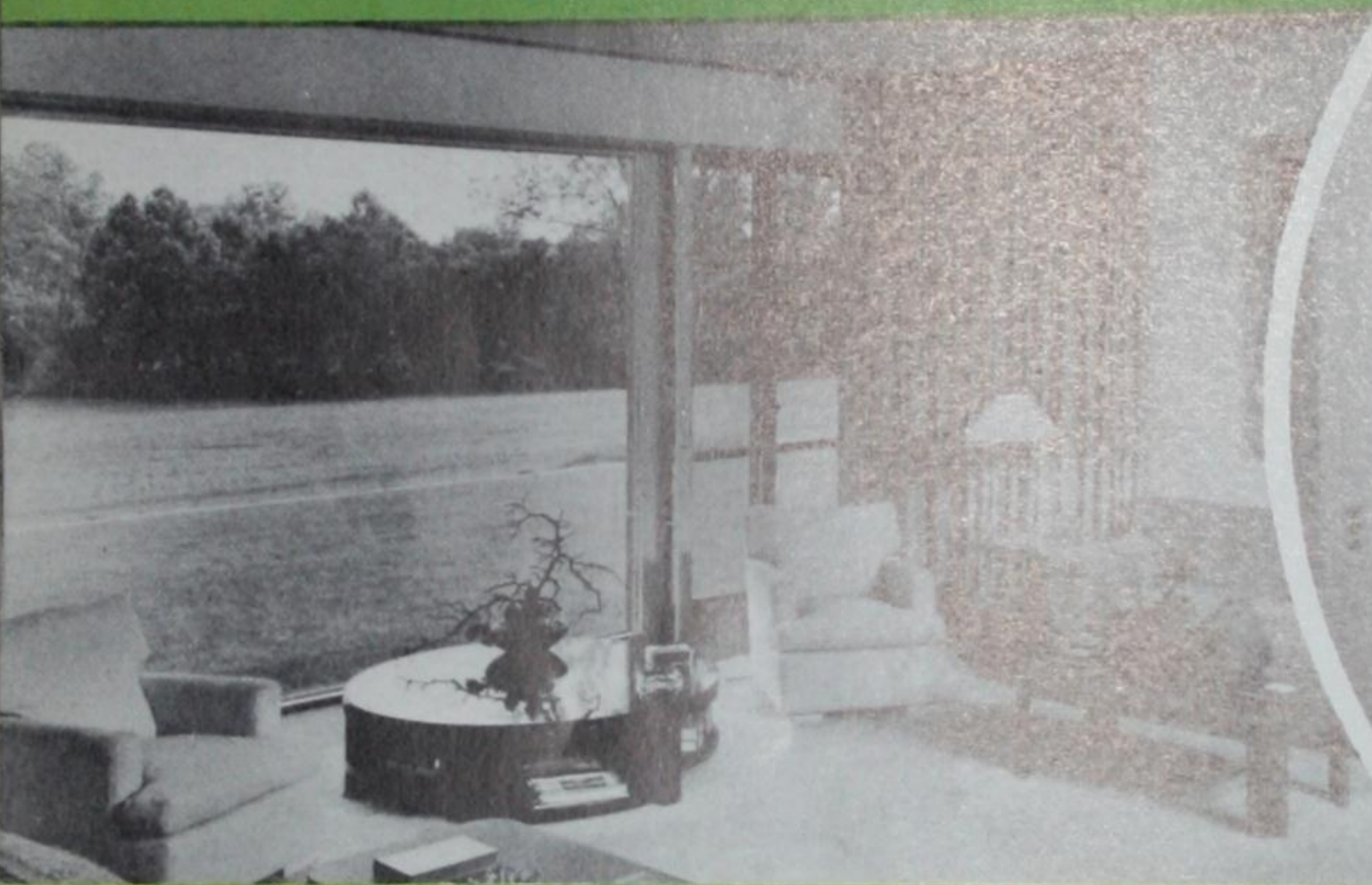
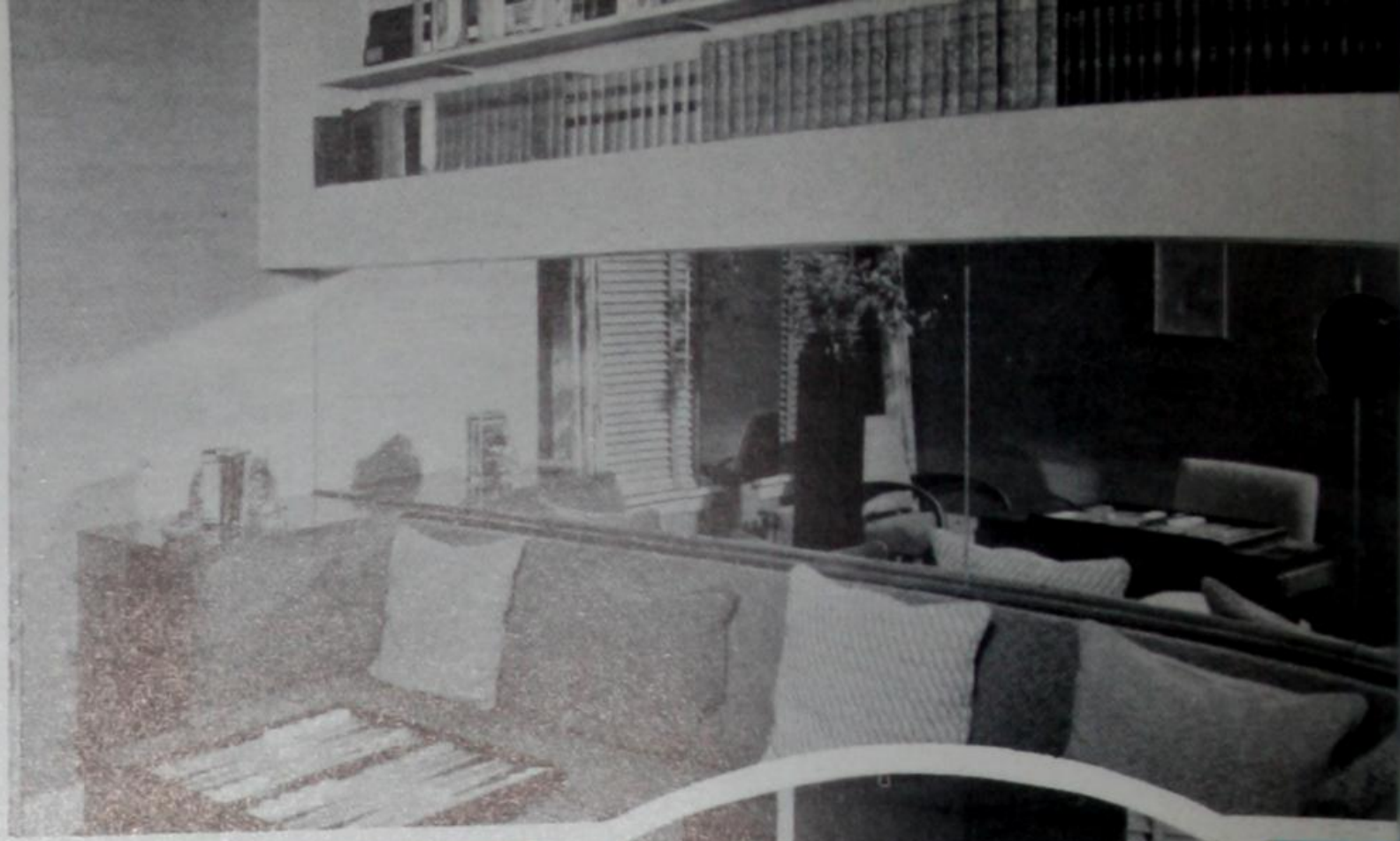
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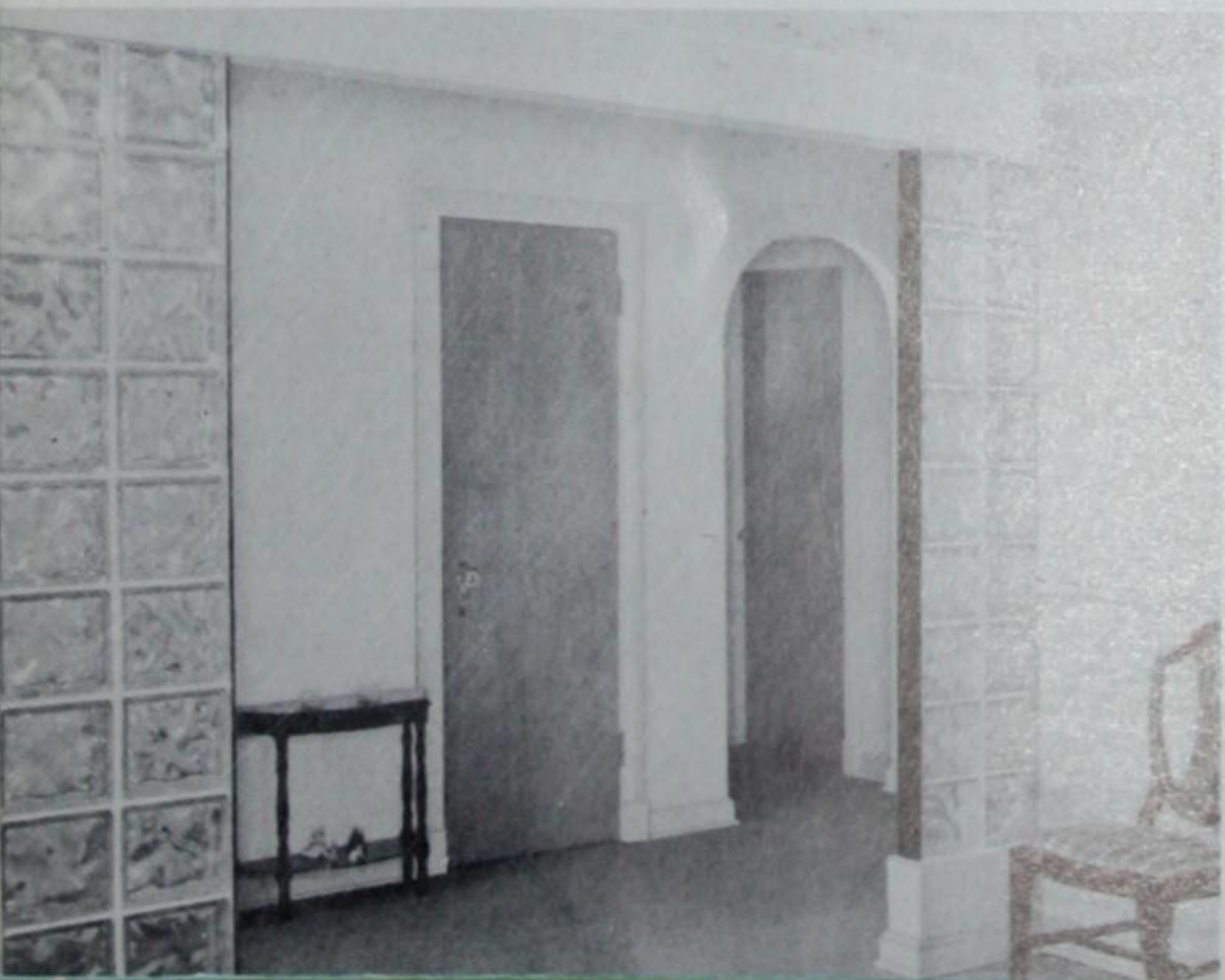
**MANTEL MIRRORS\*** do work magic in any house—large or small. They give a room an appearance of elegance that you are sure to like.

It's just good sense, too. A large mirror reflects light, and light is the key to a bright, cheerful home. A mantel mirror is a perfect way of increasing light.



**HOW TO** give a living room charm. Outdoor beauty is brought indoors by this Plate Glass picture window without cross sash.

Courtesy Houli and Gentile Glass Company, Inc., 100 E. 17th St., New York 3, N.Y. This window is made of heavy plate glass and is designed to withstand the heaviest winds. It is made of two panes of glass, each pane being 1/2 inch thick. A perfect window for a picture of the outdoors.



**YOU'D BE SURPRISED** how much glamour a couple of semi-partitions of PC Glass Blocks can add to the living room entrance, or to the arch between rooms. New, different, and attractive.



**WINDOWS** like these are now more practical than ever because of Twindow—the Double-glazed Insulating Unit. Twindow is 2 panes of glass with an air space between. It keeps heat in, cold out. Adds to comfort by eliminating downdrafts of cold air near glass areas.

Courtesy Architectural Forum—W. W. Warner, Architect





**NOTE THIS** novel mirror installation. The fireplace is surrounded by structural mirrors that run to the ceiling. And all the color and light in the room are reflected, creating spaciousness and charm as though by magic.

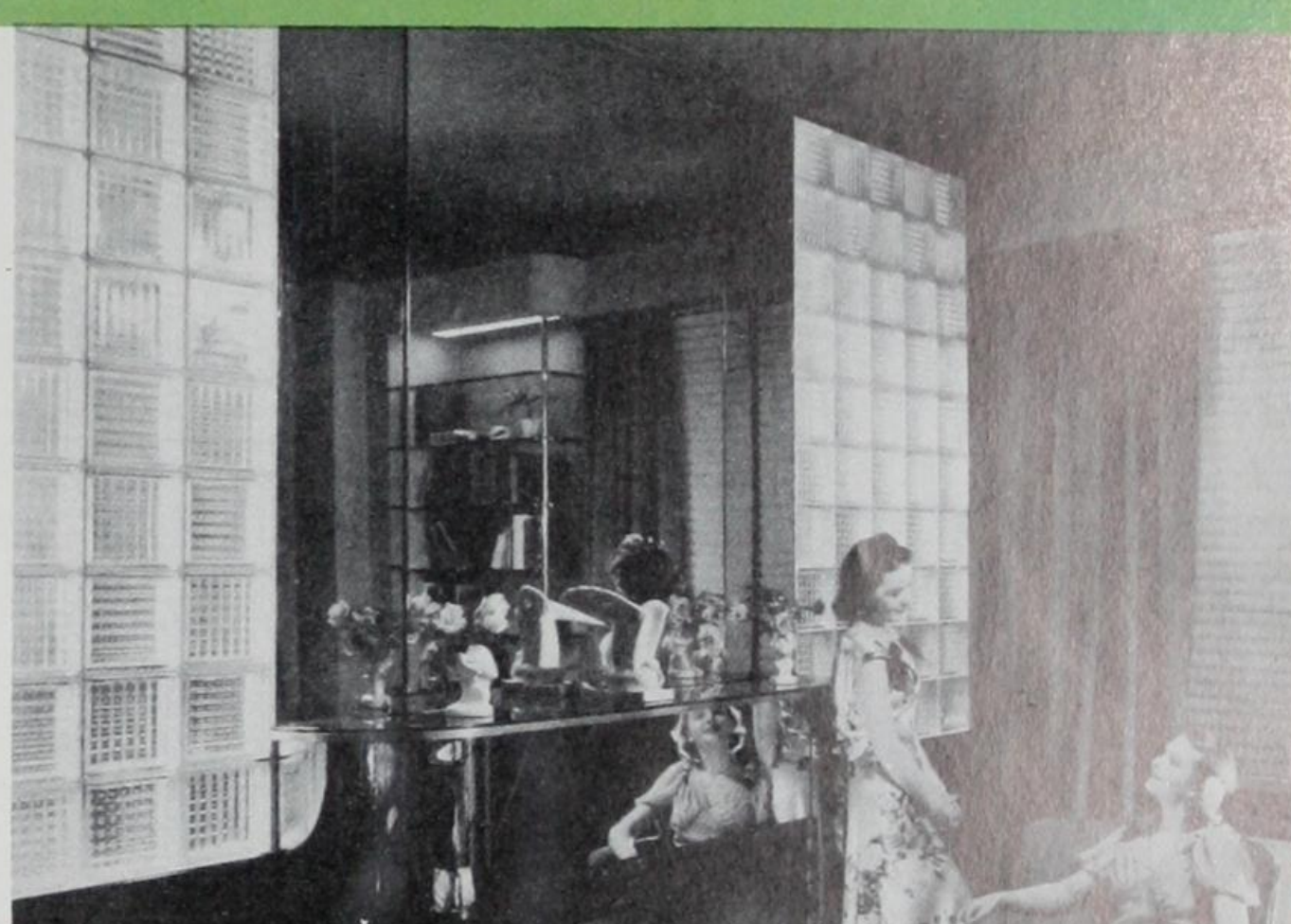


**THE FINAL TOUCH** to a living room is often a mirror. This unframed circular mirror\* is "at home" in almost any spot—over mantel, sofa, desk, or table. Extremely simple to hang. Inexpensive, too.



*Courtesy Architectural Forum—Stonorov & Bacon, Architects; Photograph by C. V. D. Hubbard*

**BRIGHTEN YOUR CORNER** with a view. Corner windows give you more light, a two-way view, cross ventilation, and extra good looks from both the outside and inside of the house.



**IN THIS ROOM**, Plate Glass mirrors surround the fireplace opening—and surmount the Carrara Structural Glass mantel top. This is flanked by panels of light-transmitting PC Glass Blocks.



*Courtesy Architectural Forum—A. Musgrave Hyde, Architect*

**FLOODS OF LIGHT** — and a view — come through these windows. Partitioned casement windows are especially recommended for the homemaker who likes something different in window design.

\*These products are available at your favorite department or furniture store.

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Courtesy American Home Magazine—Morton & Bassett, Inc.

**MORE AND MORE GLASS** is being used in modern home design. Nature comes right into a room that has windows as generously proportioned as these.



...and under glass, with an attractive, modern design, glass can be used to display a collection of objects, which is more beautiful.



...and under glass, with an attractive, modern design, glass can be used to display a collection of objects, which is more beautiful.

**NEEDS ANOTHER** attractive mirror\* installation above a mantel. You'll like the dignity and brightness that mirrors can give a room. They make a room appear more spacious, too.



Courtesy Architectural Forum—Aaron Golik, Architect

**HOW TO MAKE** a room seem twice its size: use generous-size, built-in panels of Plate Glass mirrors. And you'll love the sparkle and life they add.





**{Above}** SEE FOR YOURSELF how bright this unframed mantel mirror\* makes a room. All the daylight that enters, and all the color and gaiety of the room are reflected.

**{Below}** COMPLIMENTS GALORE would come to the owner of this home. The structural mirror adds glamour—gives the room added character and a smart, "expensive look".

*John Tucci, Designer*



*Designed by Mahel Cooper Bigelow & E. Charles Werner*

**THIS LIVING ROOM** takes on added size and liveliness thanks to the large built-in mirrors which flatter its fireplace. They make the room seem brighter, more cheerful, and more fashionable. Mirrors are available made from Plate Glass of various colors.



**PRACTICAL?** Sure—and this doorway surround of PC Glass Blocks is attractive, too. It admits plenty of light—dresses up the entrance and is as good-looking from the outside as it is from the inside of the house.



*Edward A. Stone, Architect*

**UMMM—**who could resist wanting to sit in this delightful corner! It's sure to be a favorite spot with the entire family.



**A SMART FRAMED MIRROR\*** like this, placed over a table or desk, is the last word in charm, as well as usefulness. It's inexpensive — and definitely an eye-catcher.

Patterned  
Glass

Insulating  
Glass

Storefronts

Art Glass

General Glass

Miscellaneous



## LIVING ROOMS . . . . .

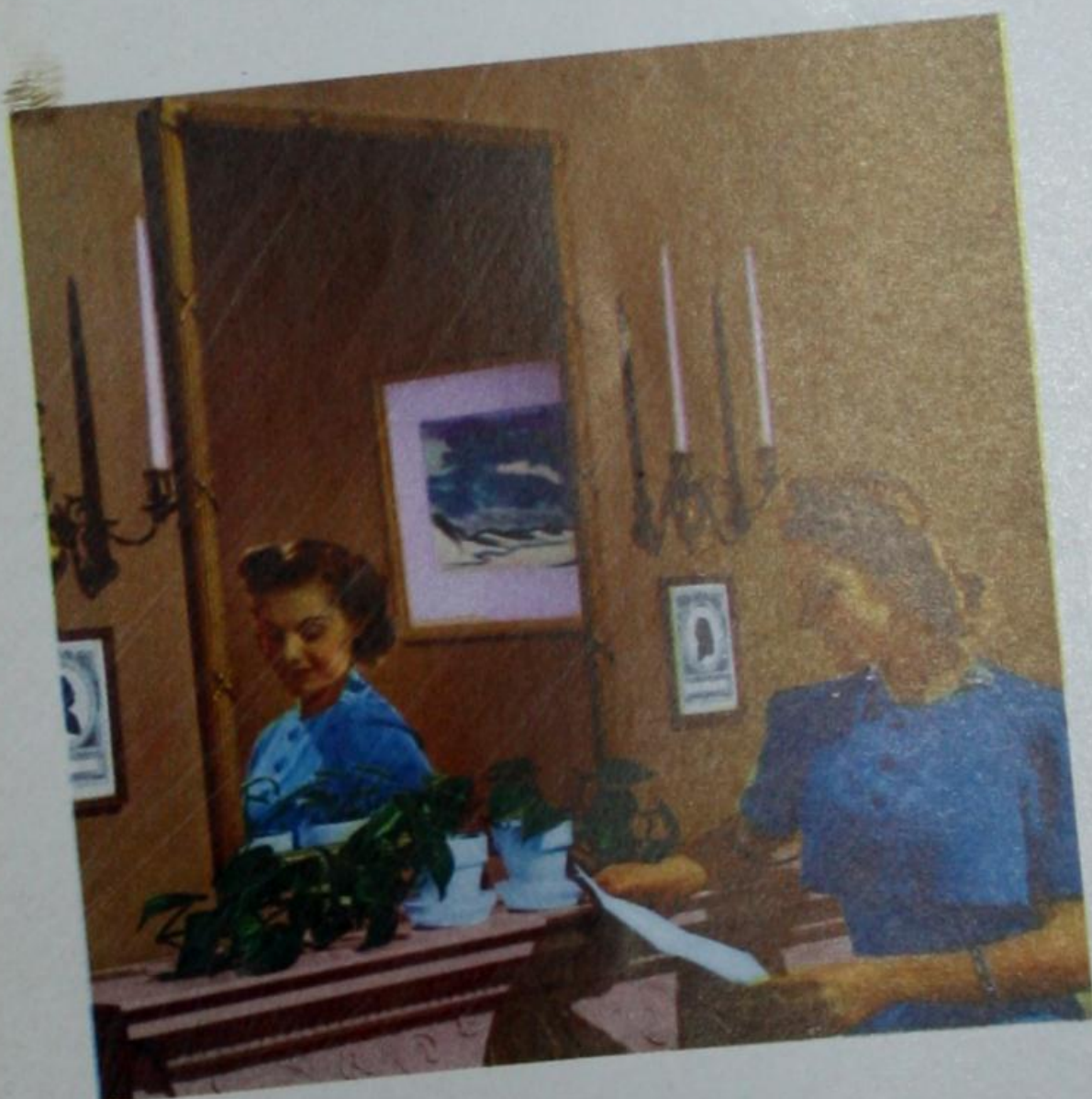
IF YOUR ROOM FEELS CROWDED, push back the walls with an oblong Plate Glass mirror\*. See how it opens up new vistas, gives an impression of style and elegance. Hung up and down, this mirror could be a full-length framed door mirror for bedroom or bath.

YOUR FIREPLACE becomes a beauty spot when you grace it with a lovely framed mantel mirror\* to catch the life and movement in the room. Handy for casual primping, too.

NO NEED TO WORRY about spilled ink, glass rings, or cigarette burns if your desks and tables are protected by Plate Glass tops\*. They're easy to clean—and very attractive.

ONE OF THE SMARTEST decorating ideas is a grouping of unframed mirrors\* like that shown at lower right. Warm colorful reflections make the room brighter and lighter. Try grouping mirrors like these over your mantel or sofa. The effect is sure to be pleasing.

GOOD TASTE is evident in the over-the-mantel arrangement of framed Plate Glass mirror\*, wall candelabra, and silhouettes shown below. It's just the right touch to dress up the room.



*\*These products are available at your favorite department or furniture store.*

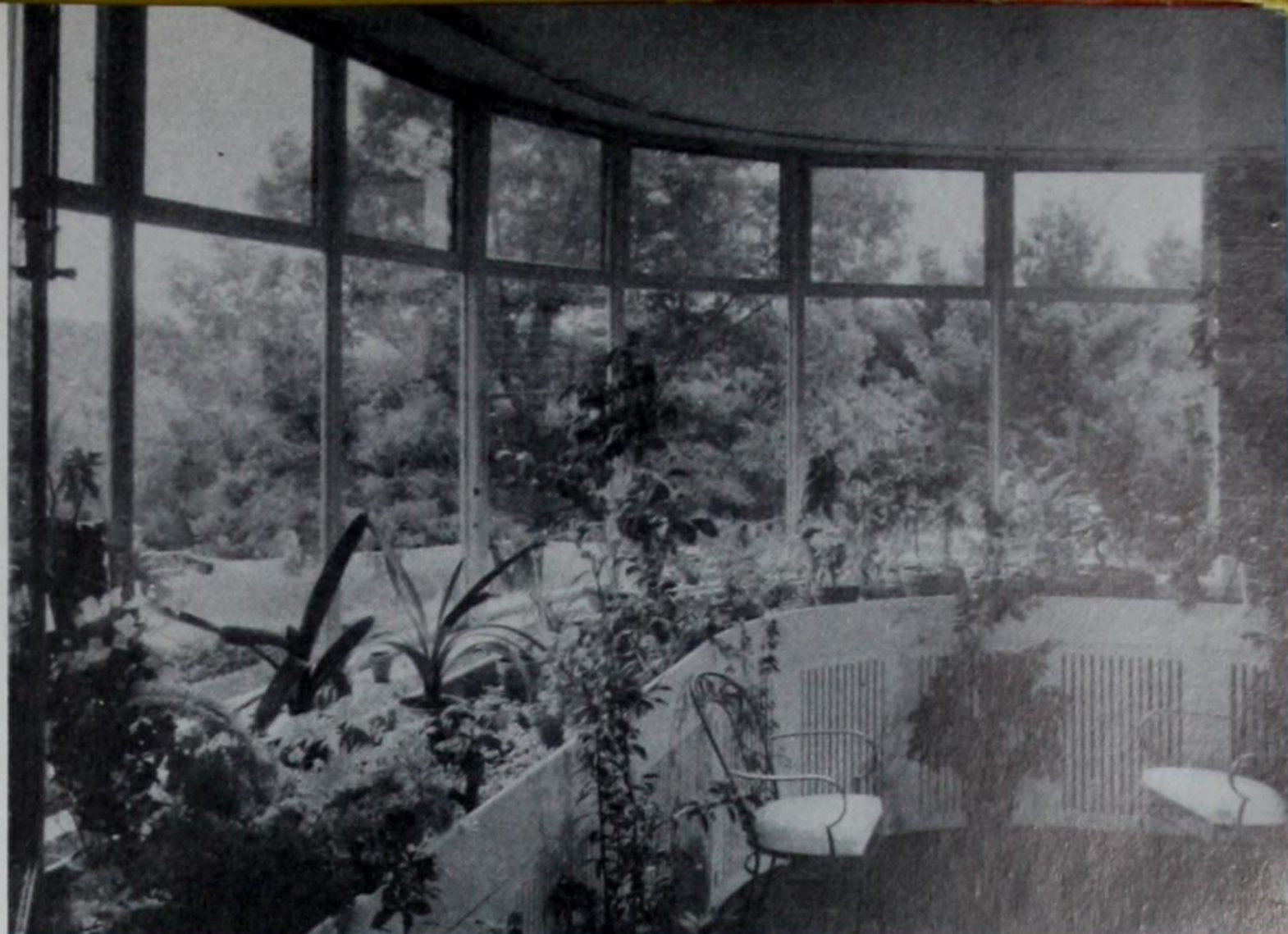




**PUT GLASS TOPS\*** on your furniture, and see how much brighter and cheerier your rooms look. And crystal-clear Plate Glass tops protect fine finishes from harm, so let Sister paint pictures to her heart's content.



**BRIGHTEN YOUR HALL** with a smart mirror\* that says "welcome" to your friends. It's a kind way to put them at ease by showing them that they're looking their best. Helps you to check *your* appearance, too, before you leave the house. Framed and unframed styles available.



*Courtesy Architectural Forum—Geddes and Kelly, Architects*

**YOUR PLANTS** couldn't help but thrive in this sunny solarium. Walls of glass make it a room that just seems made for happiness.

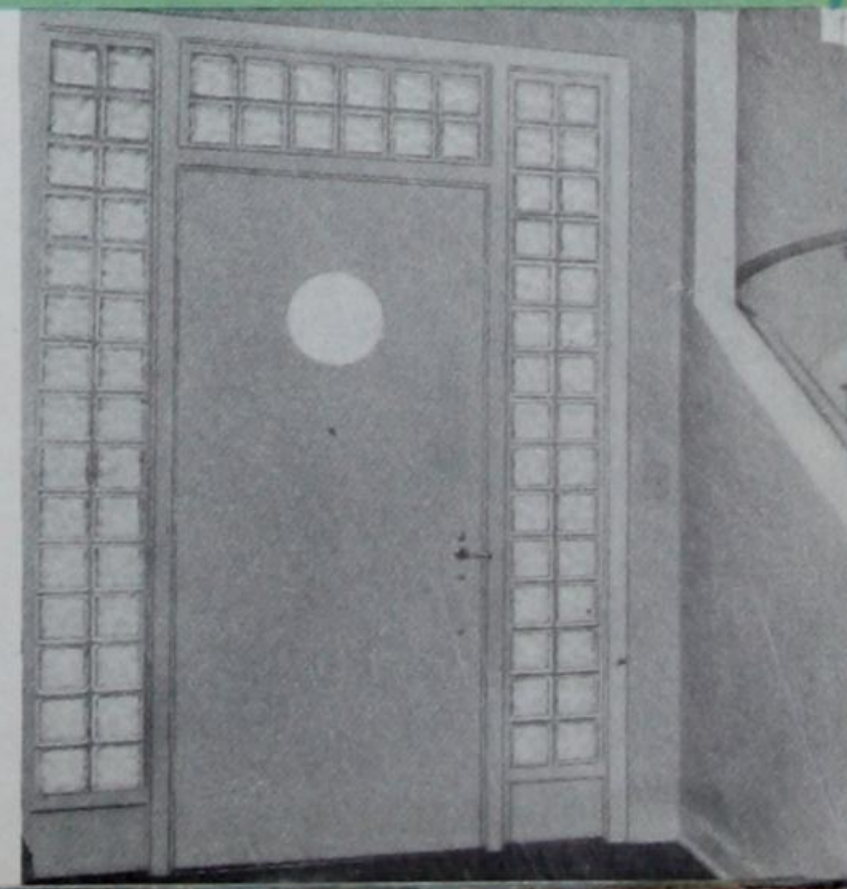
# Glass

## MAKES A FRIENDLIER HOME

Glass—that's the secret of appeal and personality in countless homes today. The possibilities of glass in design and decoration are almost limitless. It can be used in many ways to give your home more color and warmth—to make your home more attractive and practical. A little extra glass is often "the added touch that means so much" in making your house a home.

**A STAIRWAY OPENING** glazed with PC Glass Blocks brings in lots of light for the stairs, preserves privacy, shuts out unwanted views.

**PC GLASS BLOCKS** help dress up your home. A few blocks around your front door, for example, give it added attraction, day or night.









# Glass

ADDS CHEER TO DINING ROOMS



IT'S FUN to eat in a room that has an exciting personality—provided by an attractive framed mirror\* over the buffet. This is an especially effective decorating trick to make small dining rooms look larger.

HERE'S A DINING ROOM that combines utility and beauty. A "bull's-eye" mirror\* over the sideboard, and Plate Glass table tops\* give new sparkle to the room. Handsome, protective Plate Glass table tops show off your dishes and silver, too.

ONE OF THE MOST EFFECTIVE touches of glass is a circular, unframed mirror\* like this, hung in an appropriate spot—over buffet, server, or occasional table. A mirrored table top\* helps to increase the effect of smartness and good taste.

\*These products are available at your favorite department or furniture store.





Courtesy Architectural Forum—George Kosmak, Architect



Courtesy Architectural Forum—Vernon Day, Architect, Photograph by C. V. D. Hubbard

**WHAT A CHARMING SPOT** for having morning coffee. The day should certainly be more pleasant after breakfasting in front of this lovely window which invites the sun to add cheer to the room, and which affords a satisfying view of the scenery outside.

**ANYONE** would appreciate this modern "dining room with a view". The large window builds the scenery into the house. At night, curtains can be drawn to shut out vision and to make the room more formal. Note, too, the graceful table with its glistening Plate Glass top\*.

**ALL DAY LONG** light streams into this room and makes it a cheery place to dine. It's like eating outdoors, where food is always at its best. For large glass areas like this, Twindow Double-glazed Insulating Units are ideal. They keep out drafts—cut down heating costs.

**COMPANY'S COMING**, and your buffet looks its nicest with an unframed mirror\* above it to reflect light and color. It's especially effective at night when flanked by lighted candles. The mirror reflections are soft and interesting. And they give the whole room a cheerful personality.







Courtesy Architectural Forum—W. W. Wurster, Architect

*(Above)* THERE'S PLENTY OF LIGHT in this dining room. Large panels of Polished Plate Glass invite the sunshine. The circular, framed mirror\* on the wall is a lovely light-catcher.



*(Above Right)* TASTY FOOD in a dining room decorated in good taste. You can be sure that mirrors are in good taste—especially a framed Plate Glass mirror\* hung over your buffet.

*(Right)* DINING BECOMES a real pleasure in a room that is cheery and gay. Doors of Plate Glass open into this room—give it sophistication that guests admire. Note the Plate Glass table top\*.

*(Below)* CHARM ENTERS the dining room when you put a mirrored top\* on your table. It preserves the fine finish—reduces furniture care. You'll like the glamour it adds, too.



15



Patterned  
Glass

Insulating  
Glass

Storefronts

Art Glass

General Glass

Miscellaneous

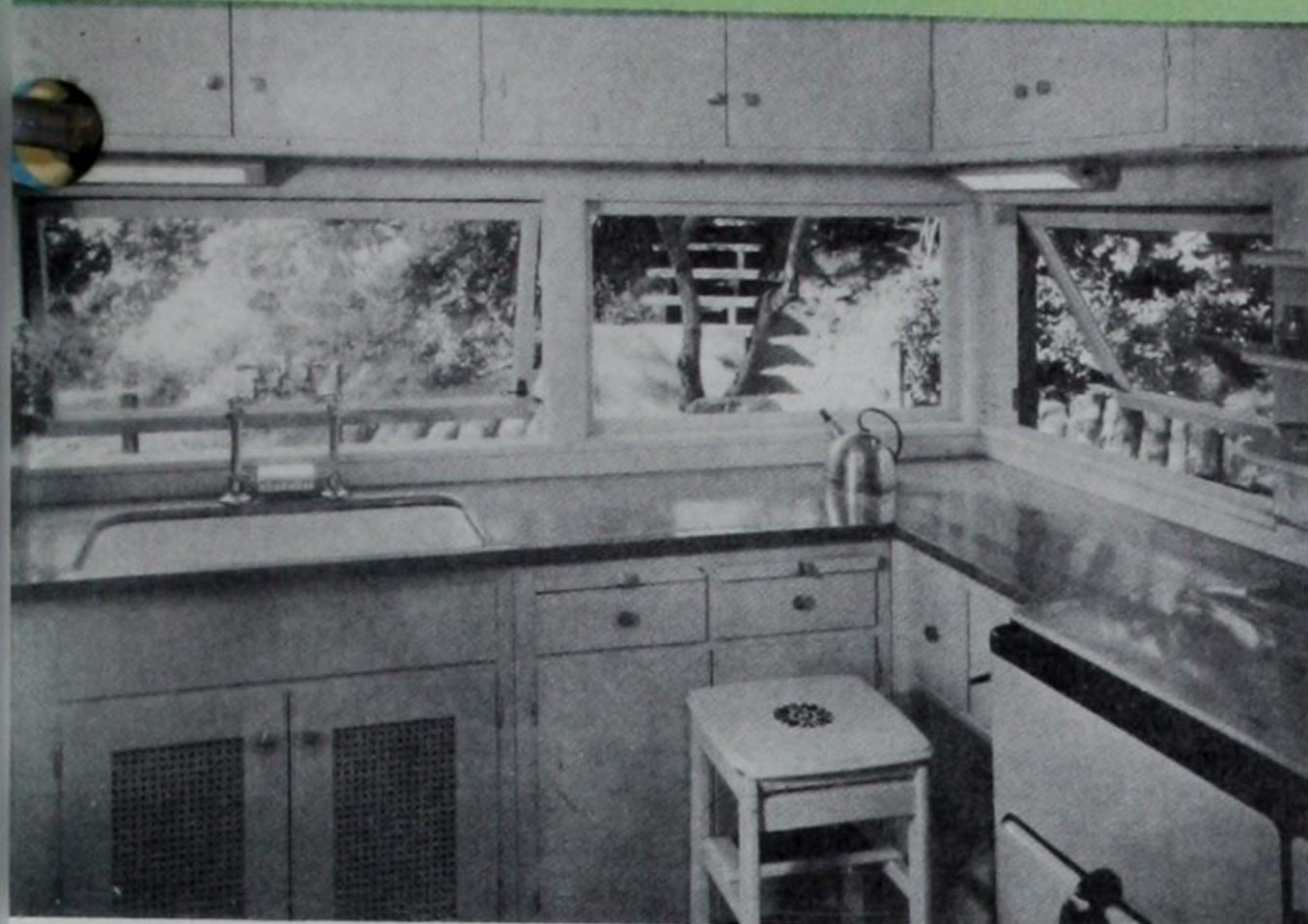






A PRACTICAL IDEA for any kitchen: low windows over the work surfaces that allow Mother to keep an eye on the children outdoors, and make the kitchen bright and cheery.

Courtesy Architectural Forum—Michael Goodman, Architect



WOULDN'T YOU ENJOY your breakfasts and Sunday night suppers in a breakfast nook like this? The attractive window frames the view and admits floods of daylight.

Courtesy Architectural Forum—G. W. Stoddard, Architect



# Glass

MAKES BEAUTIFUL  
BATHROOMS  
AND PRACTICAL  
KITCHENS



IT'S A PLEASURE to work in a kitchen that has sanitary, lovely Carrara Glass walls like this one. You can select almost any color scheme you prefer—and the kitchen stays new and beautiful indefinitely.



Designed by Mabel Cooper Bigelow & E. Charles Werner

THERE'S NO REASON why your kitchen shouldn't be bright and still have privacy. Put in a panel of translucent PC Glass Blocks. These blocks—and Carrara Glass walls—are easy to keep clean.



Maxwell A. Norcross, Architect

IF YOU WANT a smart, easy-to-clean bathroom, combine beautiful, sanitary Carrara Glass walls with a large built-in mirror like this — copper-backed to protect it against the effects of moisture.



HOW WOULD YOU LIKE a striking bathroom like this one done in Carrara Glass? You can choose color combinations from Forest Green, Tranquil Green, Ivory, Wine, Orange, Rembrandt Blue, Beige, Gray, White or Black Carrara.

Patterned  
Glass

Insulating  
Glass

Storefronts

Art Glass

General Glass

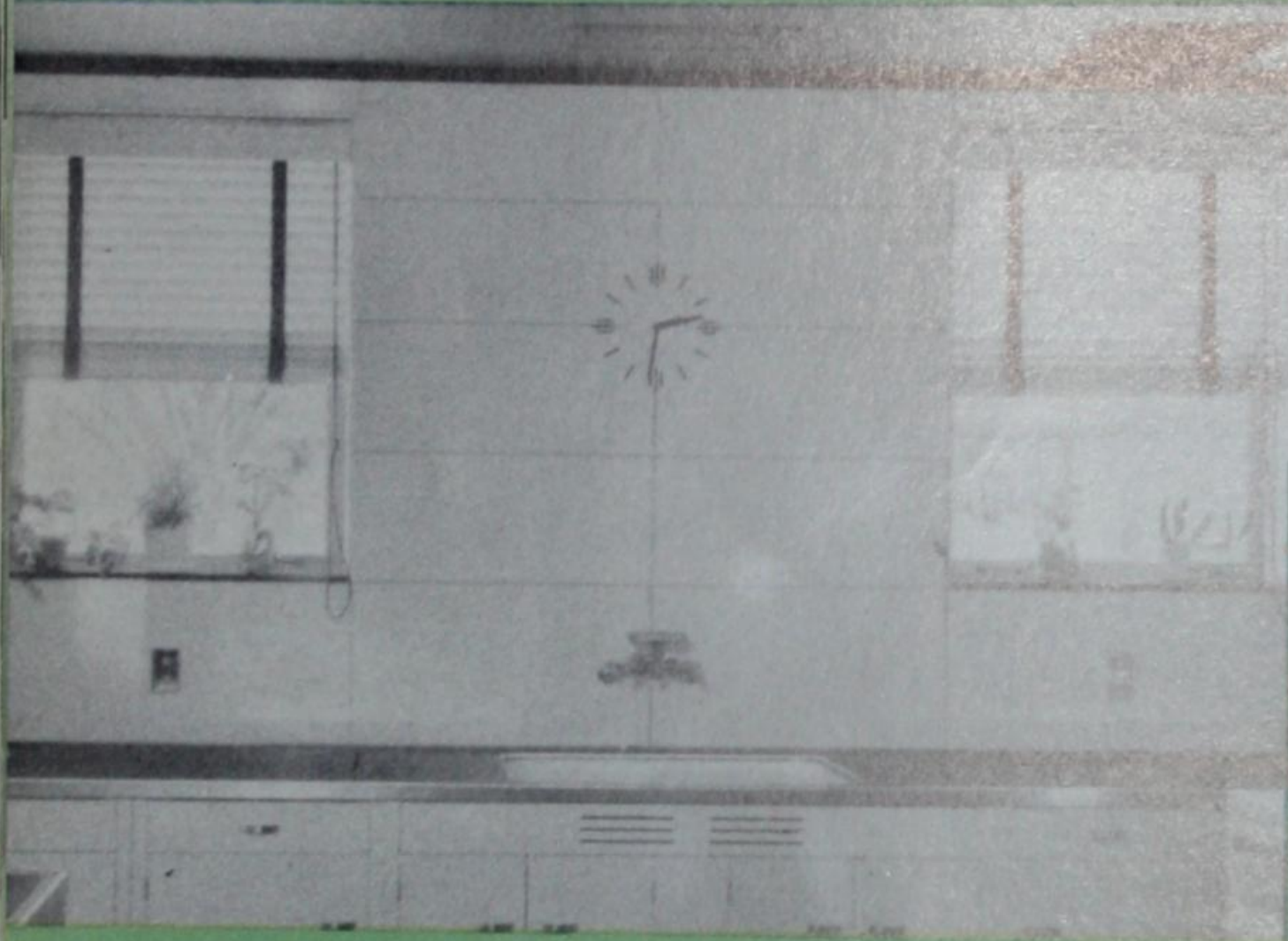
Miscellaneous





(Above) KITCHEN COMPANION. An unframed mirror in the kitchen door for quick check-ups before greeting guests.

(Below) THIS KITCHEN owes much of its charm to Carrara Glass walls. (Carrara can be applied over raw or painted walls.)

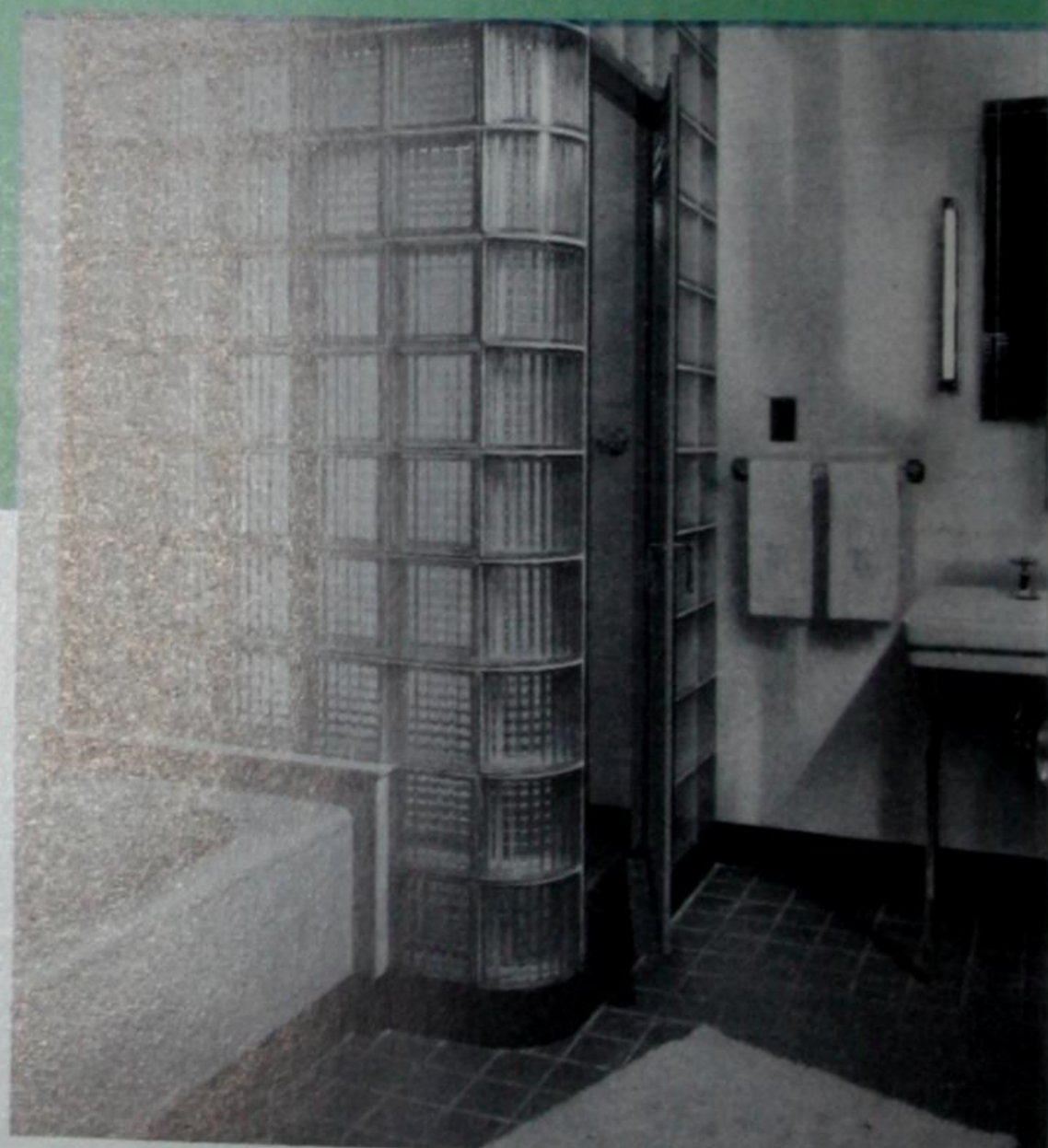


GLASS is the secret of beauty in this bathroom. Carrara walls are brilliant and reflective. An etched Plate Glass shower door makes the bath even more practical, as it does away with the use of a shower curtain.



Courtesy Architectural Forum—Photographed by Hedrich-Blessing, Samuel Marx, Architect, Noel Flint & C. W. Schonne, Associates

LET YOUR DISHES—or those preserves of which you are so proud—help to decorate your kitchen. Cupboard doors of glass show off your prettiest kitchen wares. They add sparkle, too, and are easy to clean.

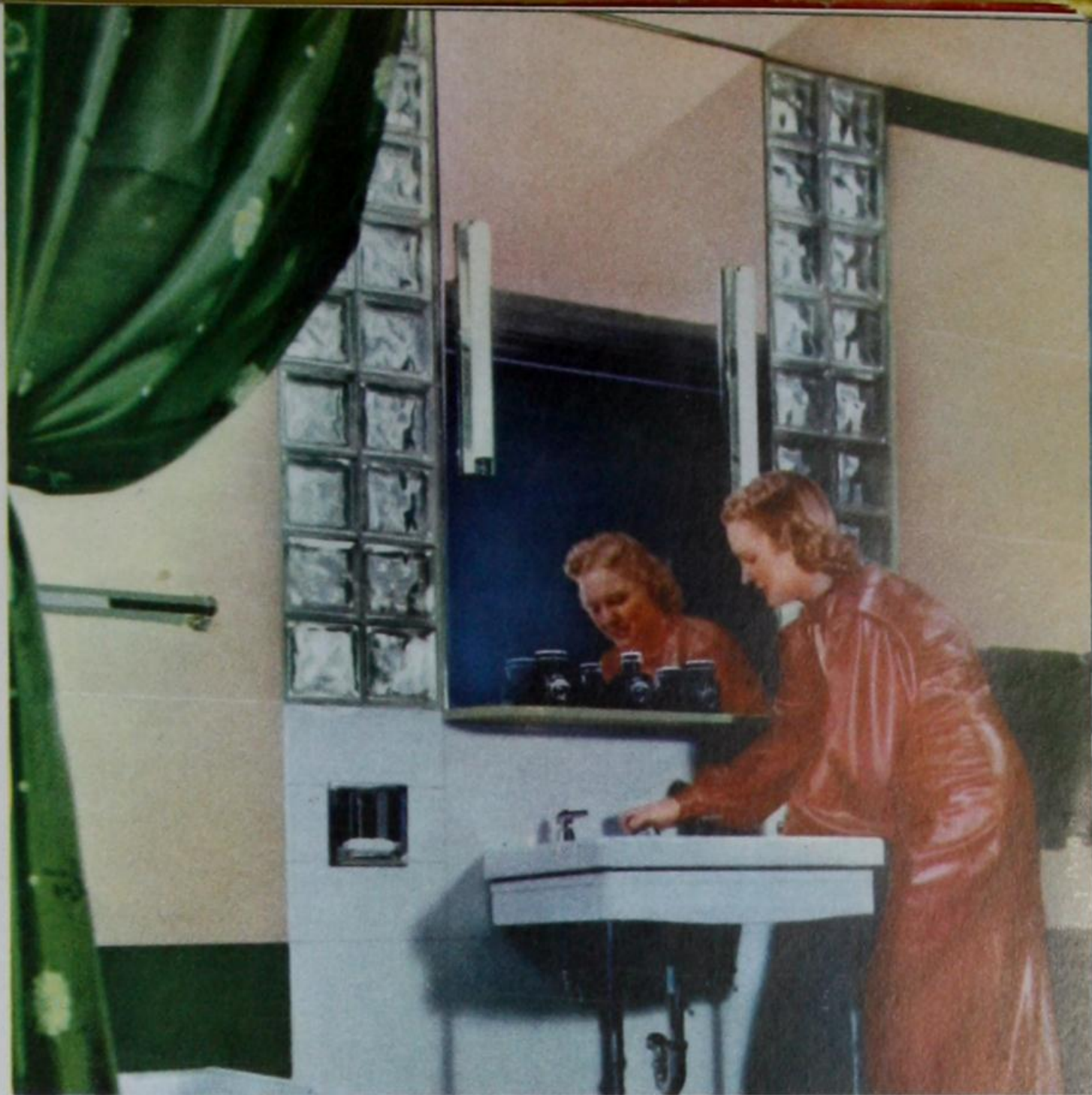


HERE'S THE ANSWER to the problem of not enough light in the shower enclosure. Build it of handsome PC Glass Blocks. They're translucent but not transparent. Easy to keep clean and bright. Unaffected by moisture.

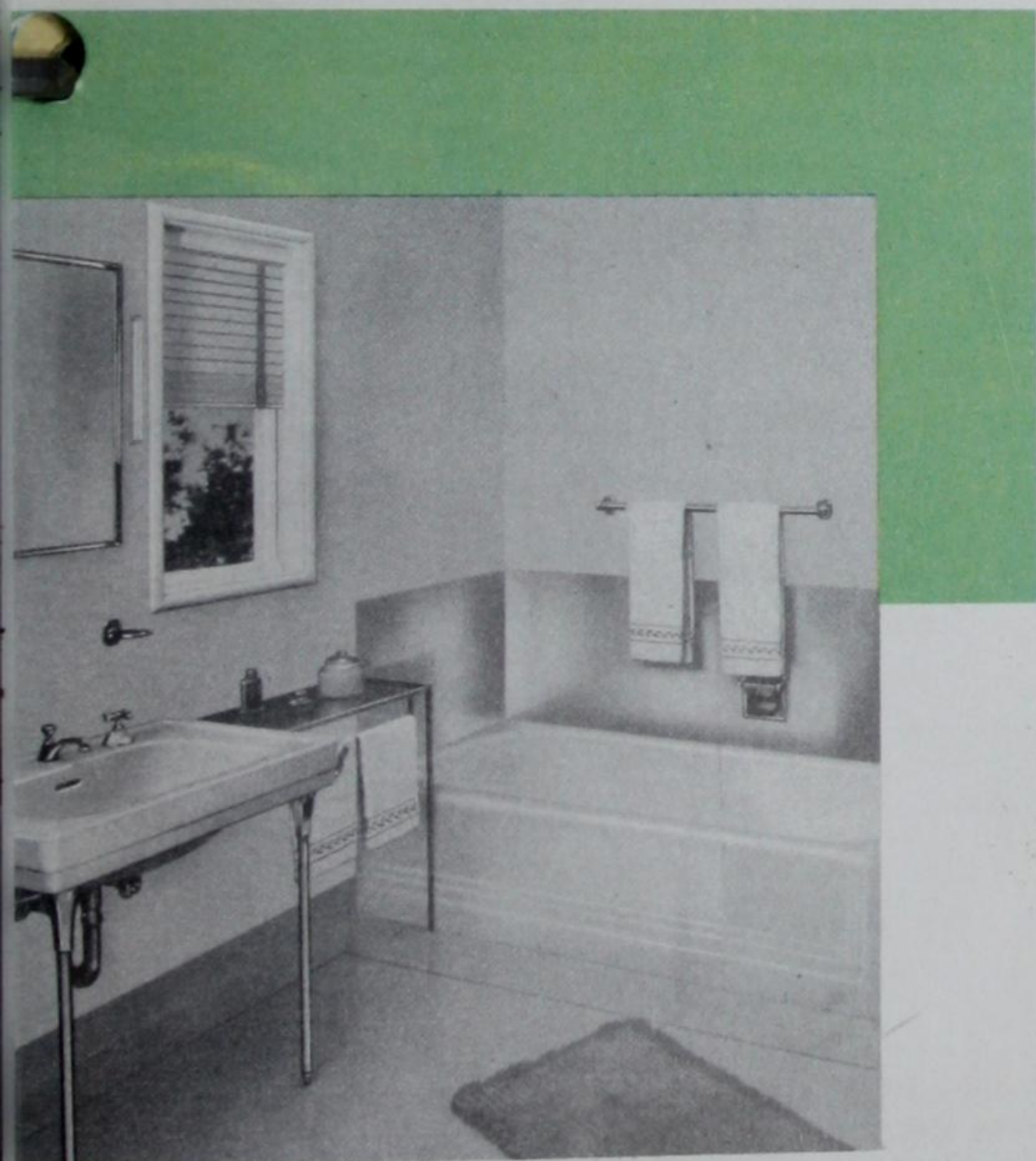




**MORE AND MORE** attention is being given to bathrooms in modern design. They should be colorful and practical, as well as sanitary. Walls and wainscots of Carrara Glass are not only beautiful but are also a great help to the home maker, as they are easy to clean and always look spic-and-span.



**GLASS** weaves a spell of loveliness in this charming room. PC Glass Blocks flank the crystal-clear Plate Glass mirror\*. Carrara Glass walls of Ivory, Forest Green, and White create a harmony in glass that any home-loving lady would be proud of.



**READY-BUILT** tub recess of Carrara Structural Glass is shipped ready for immediate installation. It's available in a variety of colors to fit in with your bathroom color scheme. 24 or 48 inch heights. Very inexpensive, but very practical.



**HERE'S ANOTHER SUGGESTION** for a kitchen mirror to help the lady of the house look her best. Surround the mirror with gay ruffled curtains like this—and the effect is very appealing indeed.

*\*These products are available at your favorite department or furniture store.*

Patterned  
Glass

Insulating  
Glass

Storefronts

Art Glass

General Glass

Miscellaneous



# Glass

MAKES BRIGHTER BEDROOMS

Maxwell A. Norcross, Architect

*\*These products are available at your favorite department or furniture store.*



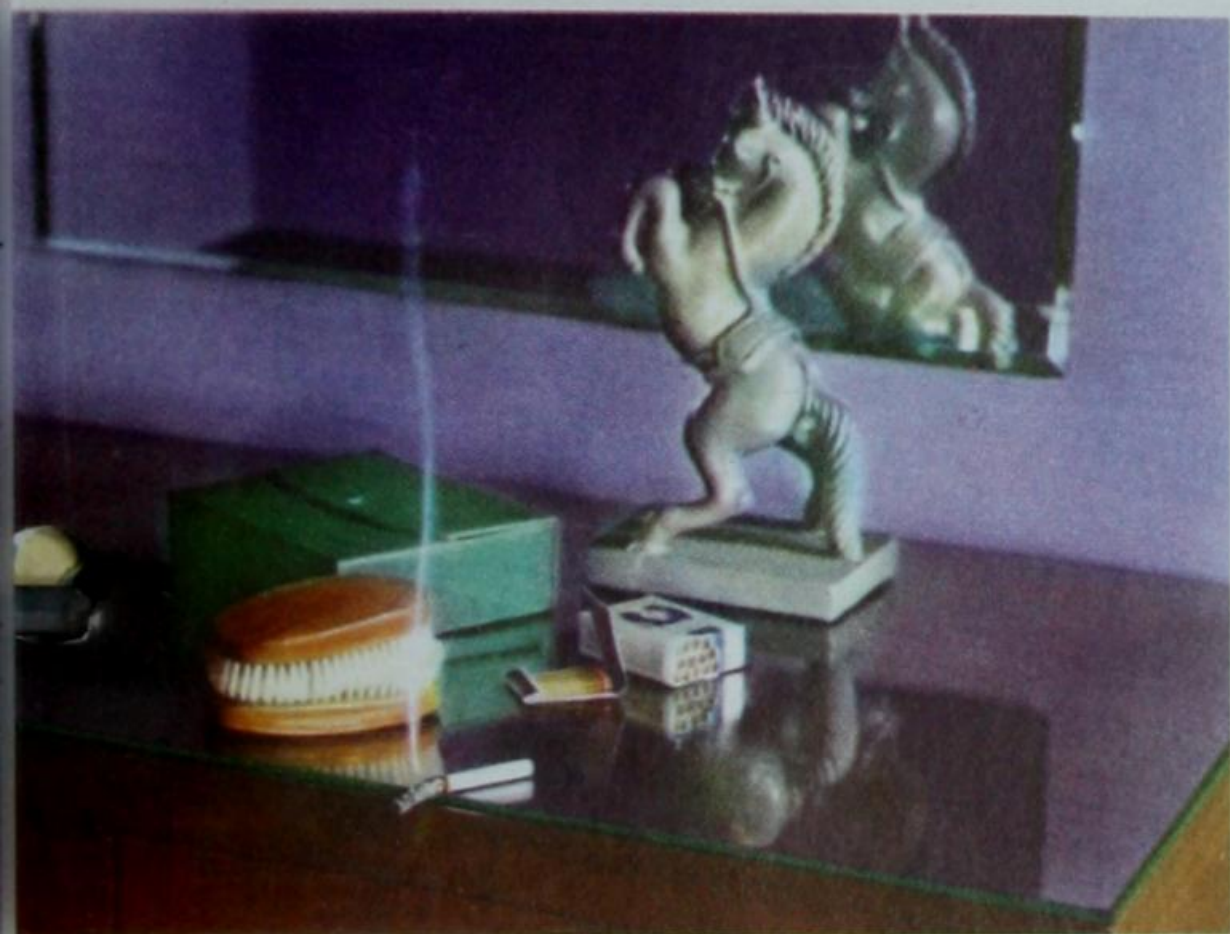




**NO HOME IS COMPLETE** without at least one full-length door mirror\*. Most homes need several. It shows you how you look from head to toe, and adds greatly to the charm of the room's appearance.



**DRESS UP** your vanity. Top it with a mirrored or transparent Plate Glass top\* that laughs at spilled cosmetics. Then hang a smart, unframed mirror\* on the wall. It will be a delightful addition to your bedroom.



**PLATE GLASS** furniture tops\* supply a happy combination of protection and good looks. They safeguard fine finishes—do away with the danger of cigarette burns, stains, and scratches. And their bright, shiny surfaces add a pleasing decorative note to a room.



**FROM HEAD TO TOE** you'll look just so. A full-length Plate Glass door mirror\* reports truthfully on your appearance. Mirror should cover completely the recessed panels in the door. Most doors require a mirror at least 5½ feet tall.



**EVERY MAN** should have a mirror\* of his own over his chest of drawers. It's handy—and he'll love you for your thoughtfulness. He'll appreciate a Plate Glass top\* on the chest, too. Then he won't have to worry about marring the furniture with cigarette burns, stains.



*Designed by Mabel Cooper Bigelow & E. Charles Wexler*

**LOOKING YOUR BEST** is easy when you have a mirrored dressing room to help you. Mirrors give clear, honest reflections and create the illusion of generous room size. Even the dressing table in this lovely room is faced with mirrors.





**SOMETHING NEW**—and very useful. A closet shelf of transparent Plate Glass\*. You can see what's on the shelf without climbing on a chair.



**YOU'LL HAVE** an adorable vanity when you deck it out with a Plate Glass top\* and then put a mirror\* over it. The added touch of beauty is the corner decorations of artificial flowers.



**SYMMETRICAL ARRANGEMENT** of great charm. Two lovely Plate Glass mirrors brighten room corners with warm reflections, while twin tables with Plate Glass tops\* flank the bed. The total effect is one of graciousness and charm.

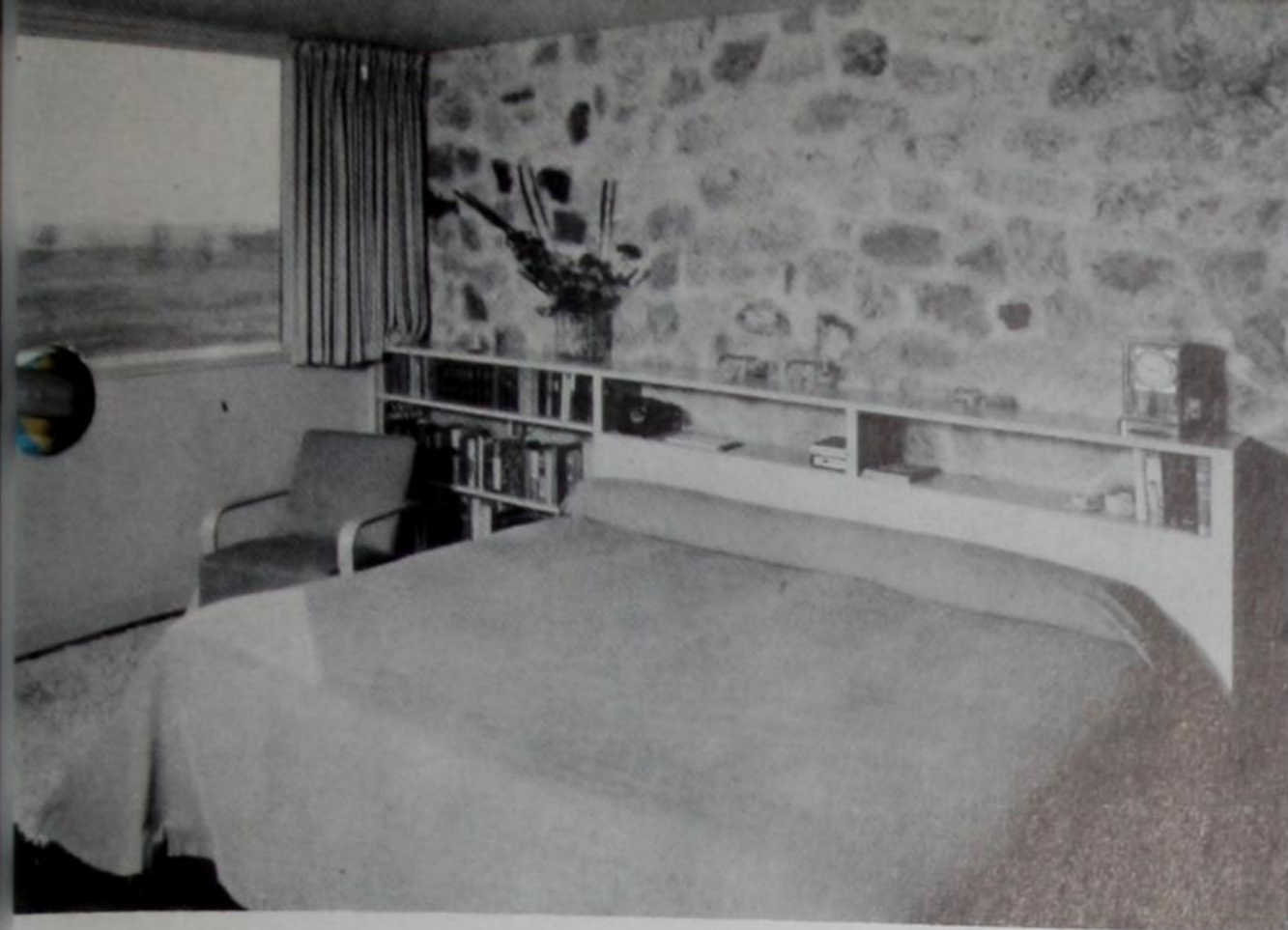


**SHE'LL BE A GROWN-UP LADY** by and by—and a sweetly poised one you can be sure, if she's had a full-length door mirror\* all her life to keep her interested in how she looks.

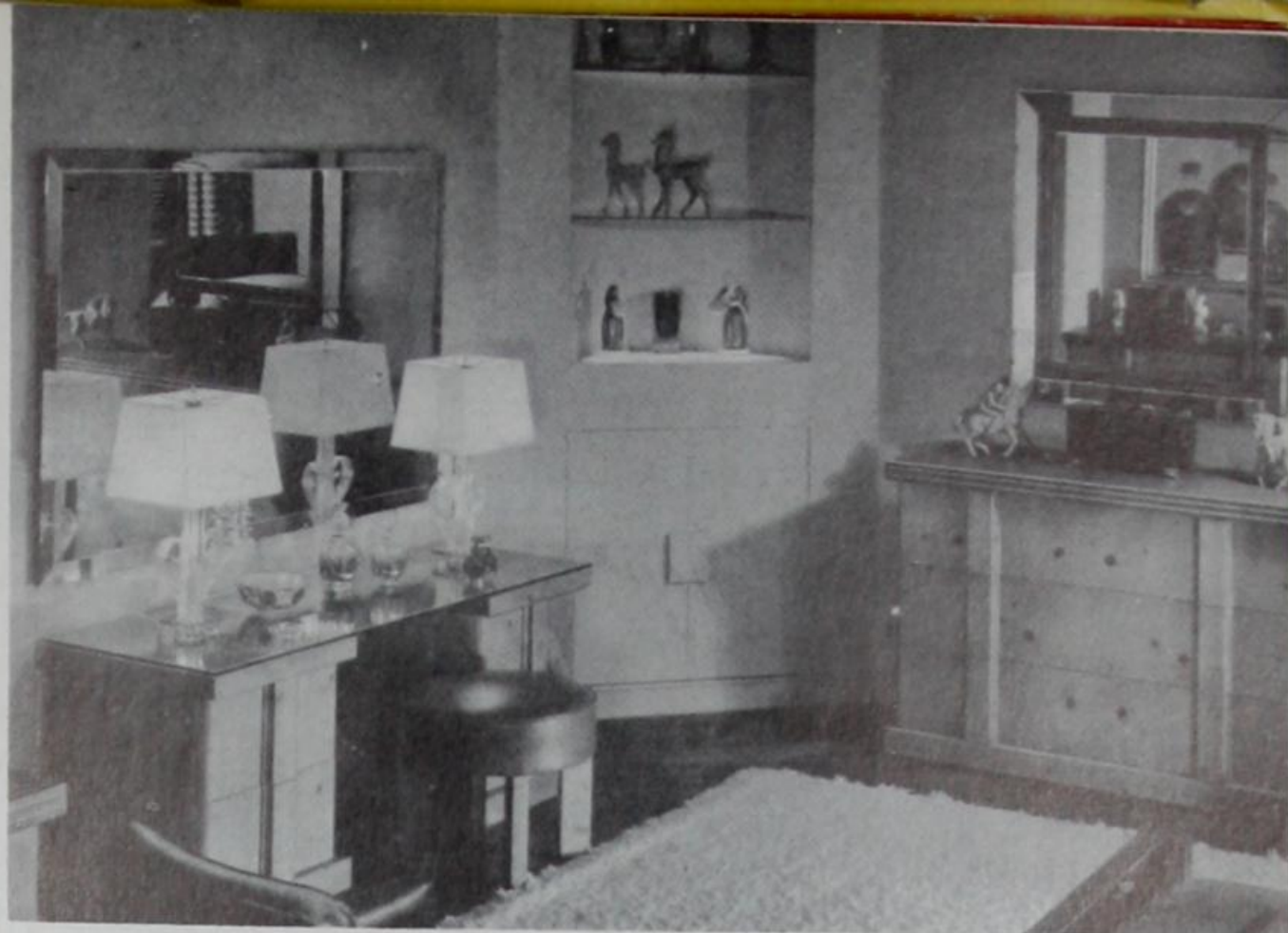
**TRUE MIRROR LUXURY** is the three-way full-length mirror. Stocking seams straight? Dress fit well? You can be sure you'll look just right—from every angle. Plan one for your home where there are two doors rather close together. Put a mirror on each, and one on the wall between.







Courtesy House & Garden—George Fred Keck, Architect

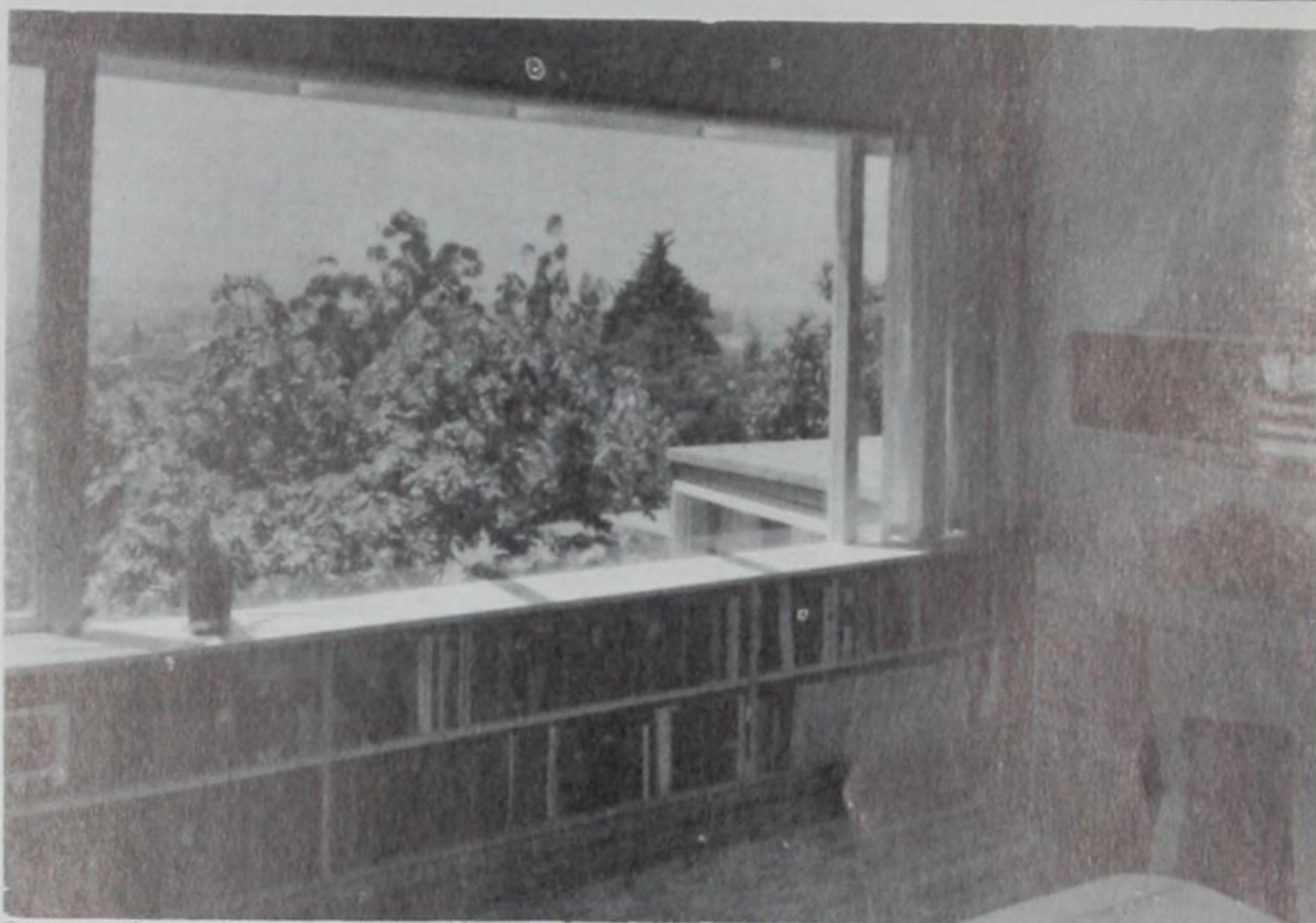


**{Above}** OH, WHAT A BEAUTIFUL MORNING! A large Plate Glass window like this allows floods of daylight to enter your room, brings the outdoors indoors. Because of its insulating qualities, Twindow is recommended for such areas.

**{Above right}** WHY NOT A MIRROR\* for the dressing room? And put a mirror\* over your vanity for your convenience, mirrors as these—or better mirrored or mirrored Plate Glass furniture\*—make ideal gifts.

**{Below}** RECIPE FOR GLAMOUR — structural mirrors to make your bedroom look larger and impressively lovely. They afford you a place to check up on your appearance conveniently, too.

**{Right}** Patterned glass\* give rooms the beauty of the landscape for such occasions. Twindow\* glazed furniture\* is ideal. It protects your tortoiseshell\* and other valuables from dust and



Courtesy Architectural Forum—J. E. Dinwiddie, Architect; A. H. Hill & P. E. Joseph, Associates

These products are available at your favorite department or furniture store.



Courtesy Architectural Forum—J. E. Dinwiddie, Architect; A. H. Hill & P. E. Joseph, Associates



# THE TREND TO *Modern* HOME DESIGN

**M**OST people, when they dream of the ideal home they hope to own someday, have a mental image of a lovely, picturesque white house with a picket fence. They visualize a certain number of rooms in the pretty white house, but usually do not picture any logical relationship between these rooms and the land surrounding the house.

Perhaps that is why the "Modern" house is the most misunderstood of all architectural styles. For a "Modern" house does not, certainly, promise the quaint, pretty exterior so often dreamed of. But it does afford advantages which usually far outweigh any lack of quaintness and sentimental prettiness.

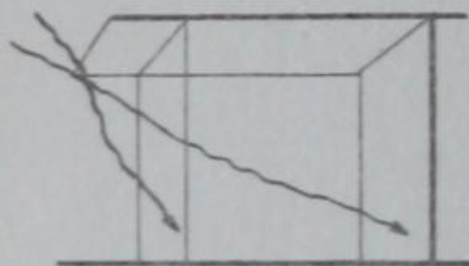
It is important, therefore, that if you are interested in building or buying a house, you should understand clearly the design principles behind "Modern" styling before making a final decision on the kind of home you want to live in. The "Modern"

house is not just an architect's dream, a silly innovation, an experimental attempt to establish a new architectural style just for the sake of being different. One of the nation's leading architects has said that if the designers of the beautiful Colonial homes which dot America had had available the kind of glass we have today, they might well have designed so-called "Modern" homes then.

The "Modern" house is designed, first of all, not for looks, but for *living*. For comfort, for greater freedom from drudgery, for pleasure and enjoyment, and for practical usefulness and economy. This does not mean that a "Modern" house need be ugly. Most of them are not. But the emphasis is placed on the inside of the house instead of the outside.

The thinking of the leading designers who advocate "Modern" homes, might be boiled down to three or four major principles:

## 1. Making the maximum use of light.



The "Modern" house should be so placed on the lot, and the living quarters faced in such a direction as to take best advantage of the sunlight. By proper design and location on the lot, sunlight can be made to reach the farthest corners of the rooms in winter, when solar heat and light are desirable,

and sunlight can be excluded to any desired degree during the warm summer months. This is accomplished by giving the house the overhanging roof which is almost a trade-mark of "Modern" architecture. When the sun is low, as in winter, its rays penetrate the house under the roof overhang. When the sun is high, the overhang prevents the direct rays from penetrating much beyond the windows. "Modern" houses are never gloomy. Furthermore, because they control the light, they are easier on the eyes and result generally in better health for the occupants.

## 2. The land becomes a part of the house itself.



The architect designs the rooms with the definite objective of taking advantage of the surrounding shrubbery, gardens, lawns—of any attractive view which may present itself on your own property or in the distance. Thus, he designs the outdoors into the house itself. To do so, large windows, large

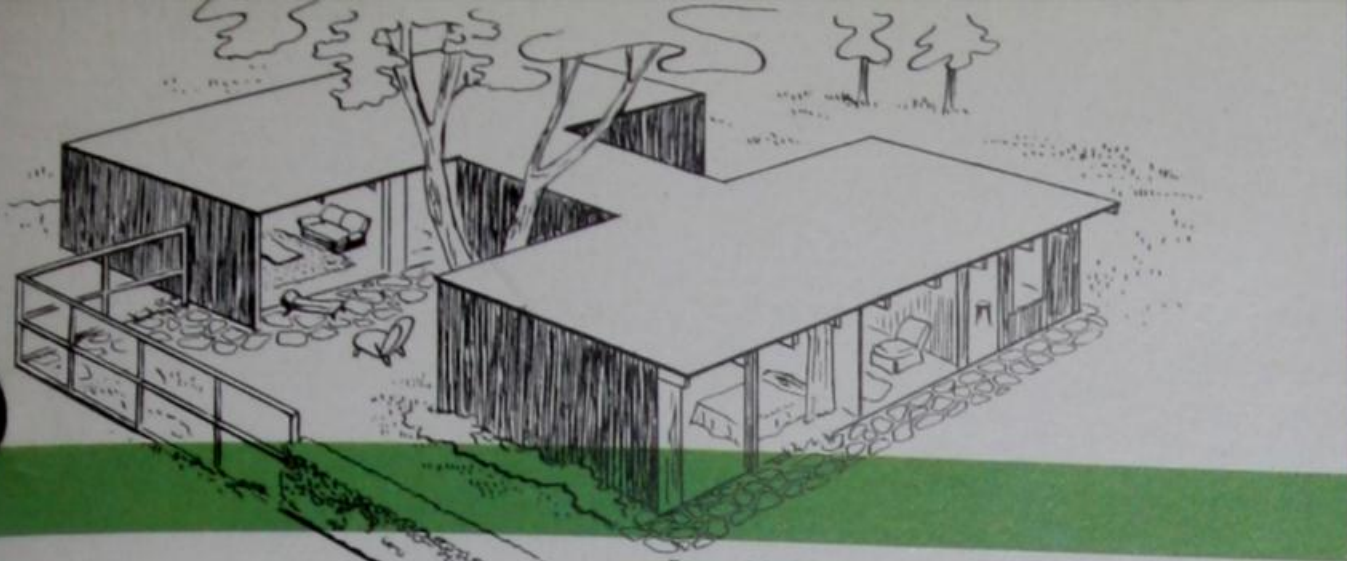
glass areas are utilized, and the old cramped, shut-in feeling, inevitable with opaque walls and small openings, is virtually eliminated. These large glass areas required in "Modern" styling are not excessive in cost, however, contrary to a common belief. The total cost of a glass wall, properly fitted with economical draw curtains, is no more than the ordinary outside wall of the same area including a small window, shade, and chintz draperies.

A recent development in glazing has made large windows more practical than ever before. This is Twindow, the new Double-glazed Insulating Unit. It consists of two panes of Plate Glass with an insulating air space between. The unit, available in various sizes and with the air space permanently sealed around the edges, is installed just like an ordinary single light of glass. Yet because of its insulating value, it prevents heat loss, cuts



Courtesy American Home Magazine—Dunwiddie & Hill, Architects

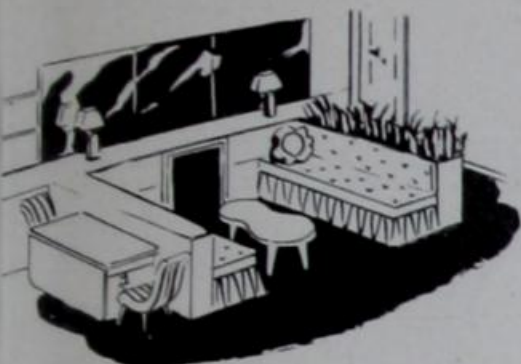




From original design by Norman and Jean Bodman Fletcher.

fuel bills, does away with downdrafts of cold air near windows, adds to health and comfort the year 'round. It eliminates the necessity for storm sash.

### 3. Economy of space.



Houses cost more to build today than they used to. You cannot afford to waste space, to have too many special rooms for special purposes. For example, in the "Modern" house, you can combine your living room and dining room, and have a better, more attractive room for both purposes. Instead of a separate dining room, in use not more than three hours out of the 24, you have a combined living-dining room which is in use all the time. Similarly, other rooms can be combined to provide multiple use of the same space. In a "Modern" house, the architect believes you get more for your money in this way.

Instead of a separate dining room, in use not more than three hours out of the 24, you have a combined living-dining room which is in use all the time. Similarly, other rooms can be combined to provide multiple use of the same space. In a "Modern" house, the architect believes you get more for your money in this way.

### 4. Suited to changes in our mode of living.

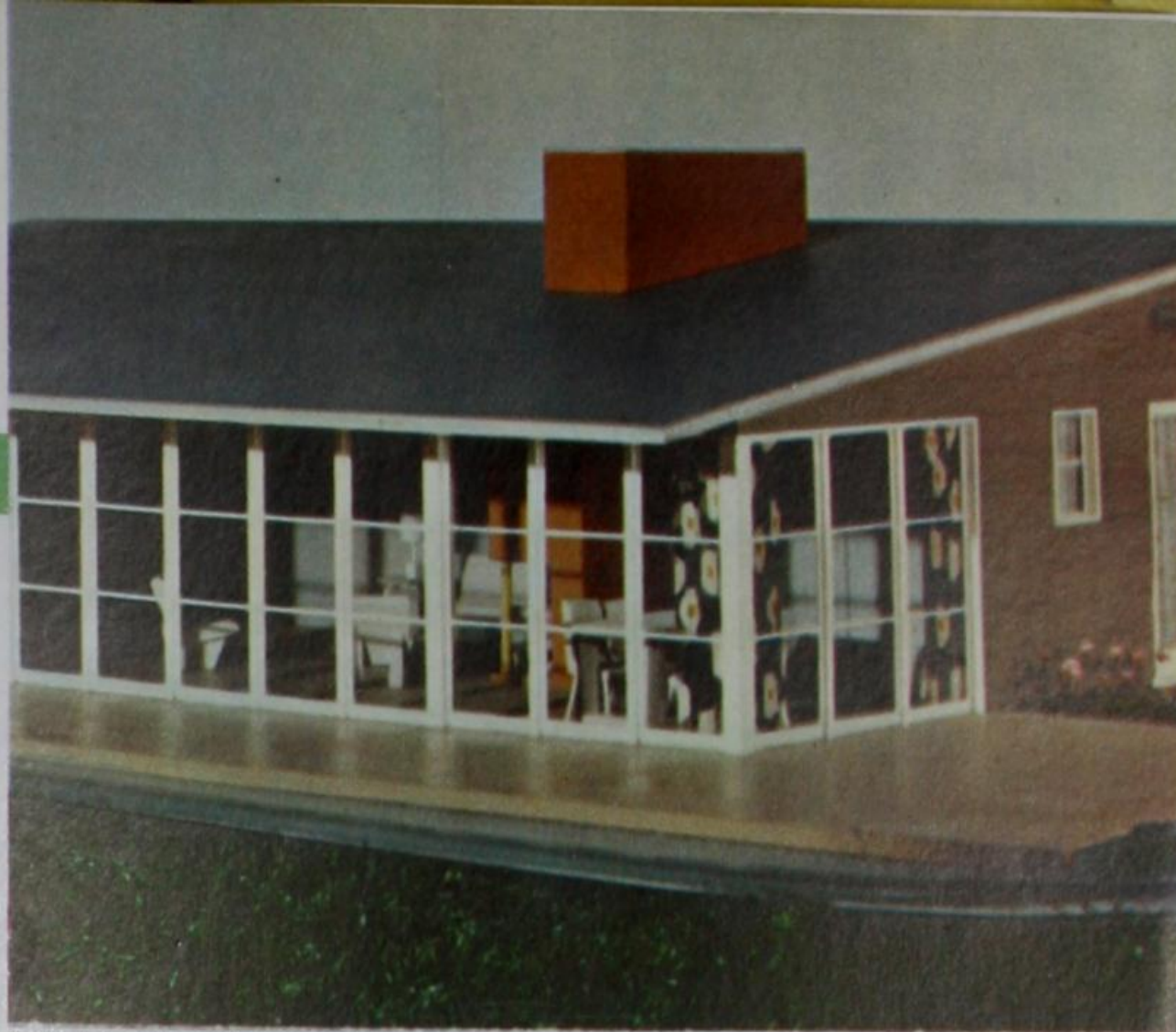


A shortage of domestic help has been making itself felt in recent years. There are no signs that this shortage will be remedied immediately. A home, therefore, must be designed which will make the housework easier and quicker, on the premise that a large majority of American homes will be servantless.

So most "Modern" houses are designed to be all on one floor. Further, our homes are becoming more and more mechanized. Washing machines, ironers, dishwashers, dryers, electric stoves, automatically-controlled heat, mean that the housewife has more leisure to enjoy her home, more free time for *living*. Isn't it a good idea to build a house, therefore, where the utilities will be properly grouped for greatest efficiency, and the rest of the home is designed deliberately for enjoyment, including efficient use of the space around the house for play areas, service areas, terraces, etc.? Isn't it a good idea to have fewer corners, fewer panels, fewer angles inside the house—so it will be easier to clean? Isn't it a good idea to spend less money for bricks, stones and mortar, and more for the machines and equipment to make *living* easier? And isn't it a good idea to design a house which is deliberately arranged to provide the very best facilities for the fulfillment of a home's 3 major functions: activities, work and relaxation?

If you keep these basic reasons for "Modern" in mind, you will understand this increasingly popular style for what it is . . . a sincere and brilliantly successful attempt to design homes which are really suited to modern living conditions . . . and which not only provide the maximum efficiency and economy for home-loving American families, but which are more *fun* to live in.

The following two pages show you two typical "Modern" homes . . . and explain briefly what they mean in terms of more pleasant living. They are Prize Winners in a recent Pencil Points—"Pittsburgh" Competition, among architects throughout the country, for the design of a "House for Cheerful Living".



Karl J. Bolser & Karel H. Dekker, Architects.



Alexis Dukelski, Architect.



Oliver Lundquist, Architect.

Patterned Glass

Insulating Glass

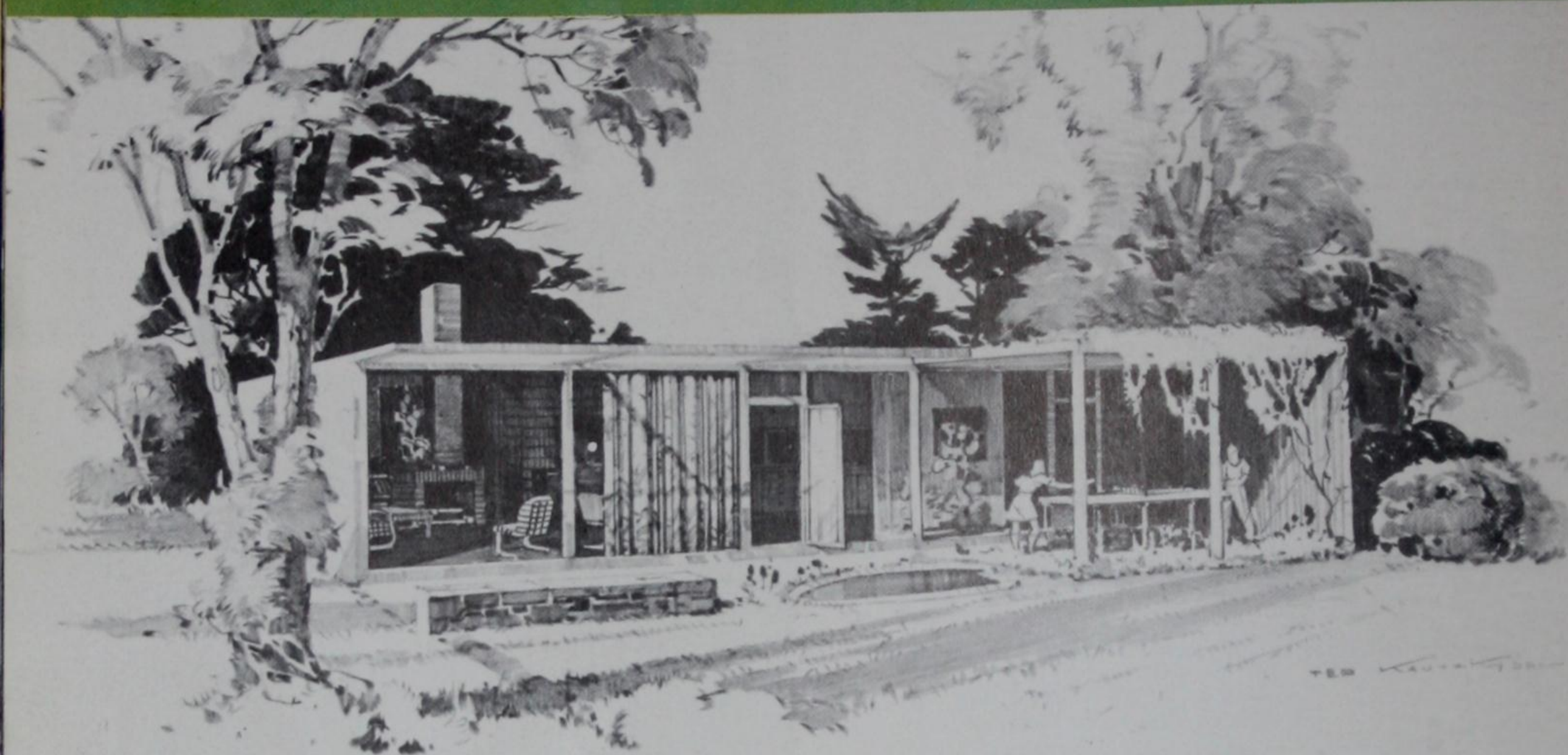
Storefronts

Art Glass

General Glass

Miscellaneous





This house has the necessary facilities for all daily activities and they are arranged for easy upkeep and cheerful living.

The roof plan is essentially a square. Thus the outline of the building's shape is simple and interest is obtained by undercutting for the car shelter, piercing the roof for a court on the front, and extending it slightly for the outdoor play porch.

The large area facing the rear of the lot is divided to retain the inherent spaciousness, yet use the space for varied purposes.

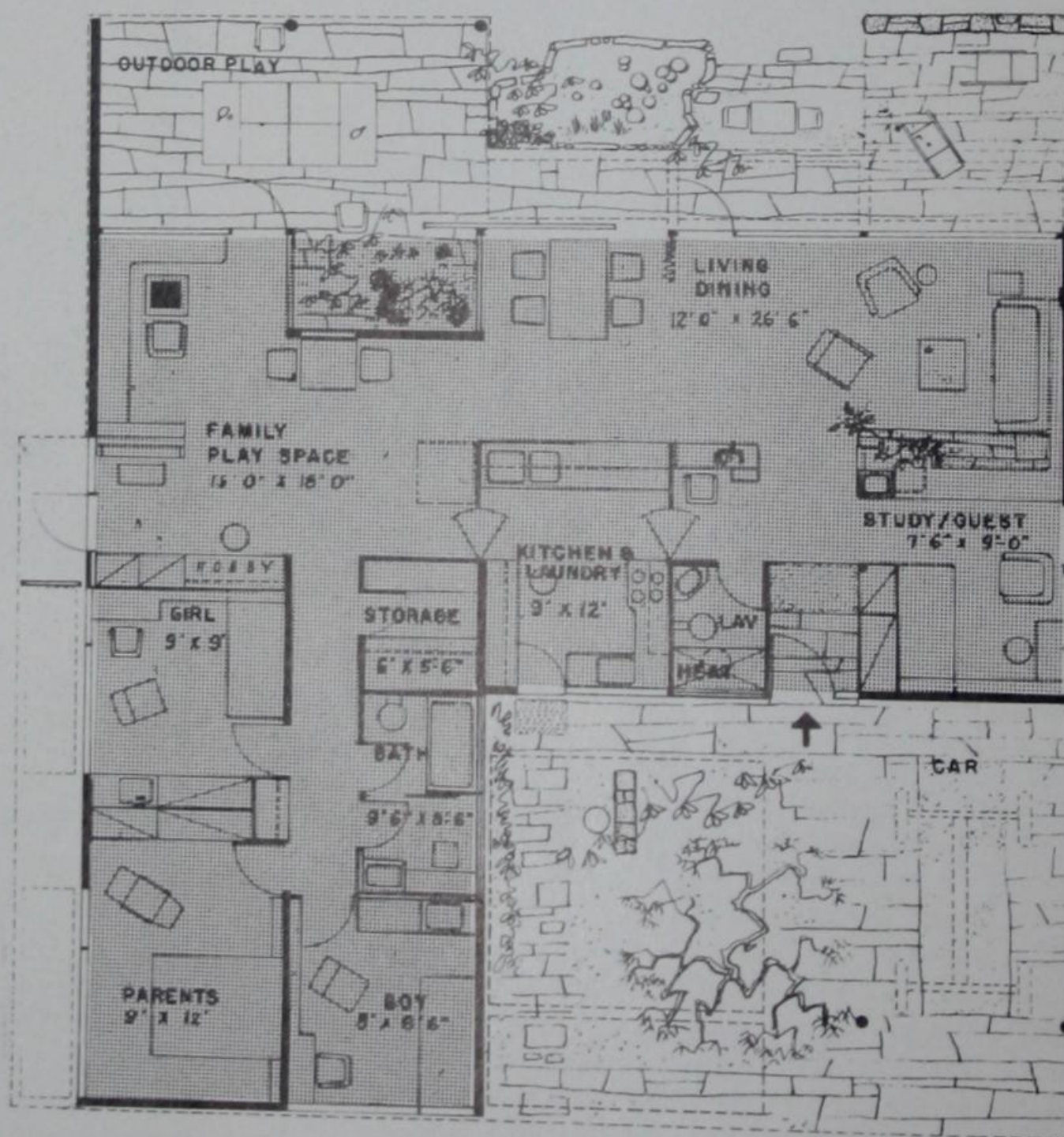
Fireplace and desk separate the study from the living room.

The kitchen has a double outlook—onto the attractive entrance court and through the dining area to the rear garden by means of an open-top counter wall.

A sliding glass arrangement screens the living room from cooking odors and kitchen noises.

Family play and hobby space is segregated by the kitchen projection and by the depressed wall for the planning area.

Architects: I. M. Pei and Frederick G. Roth



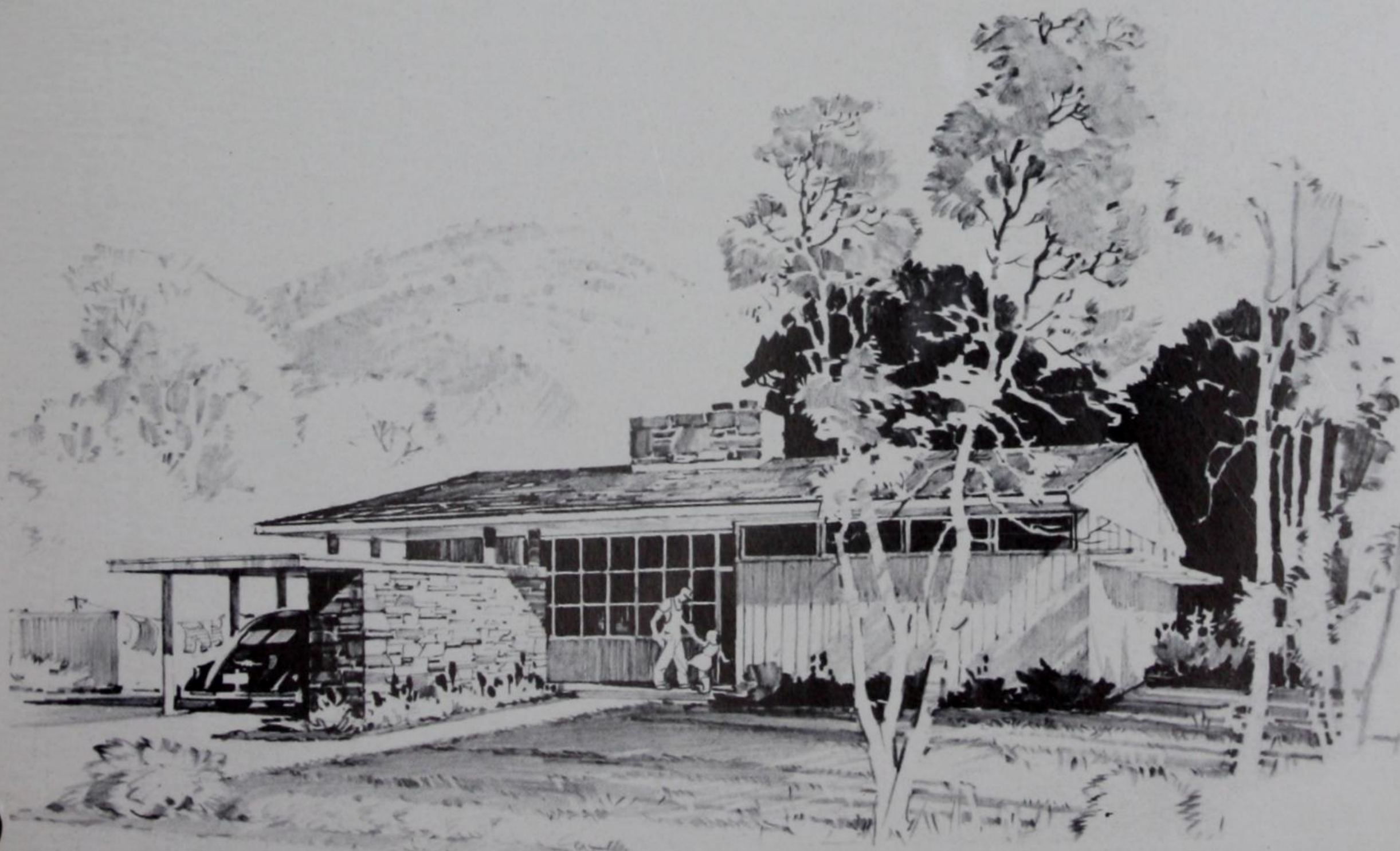
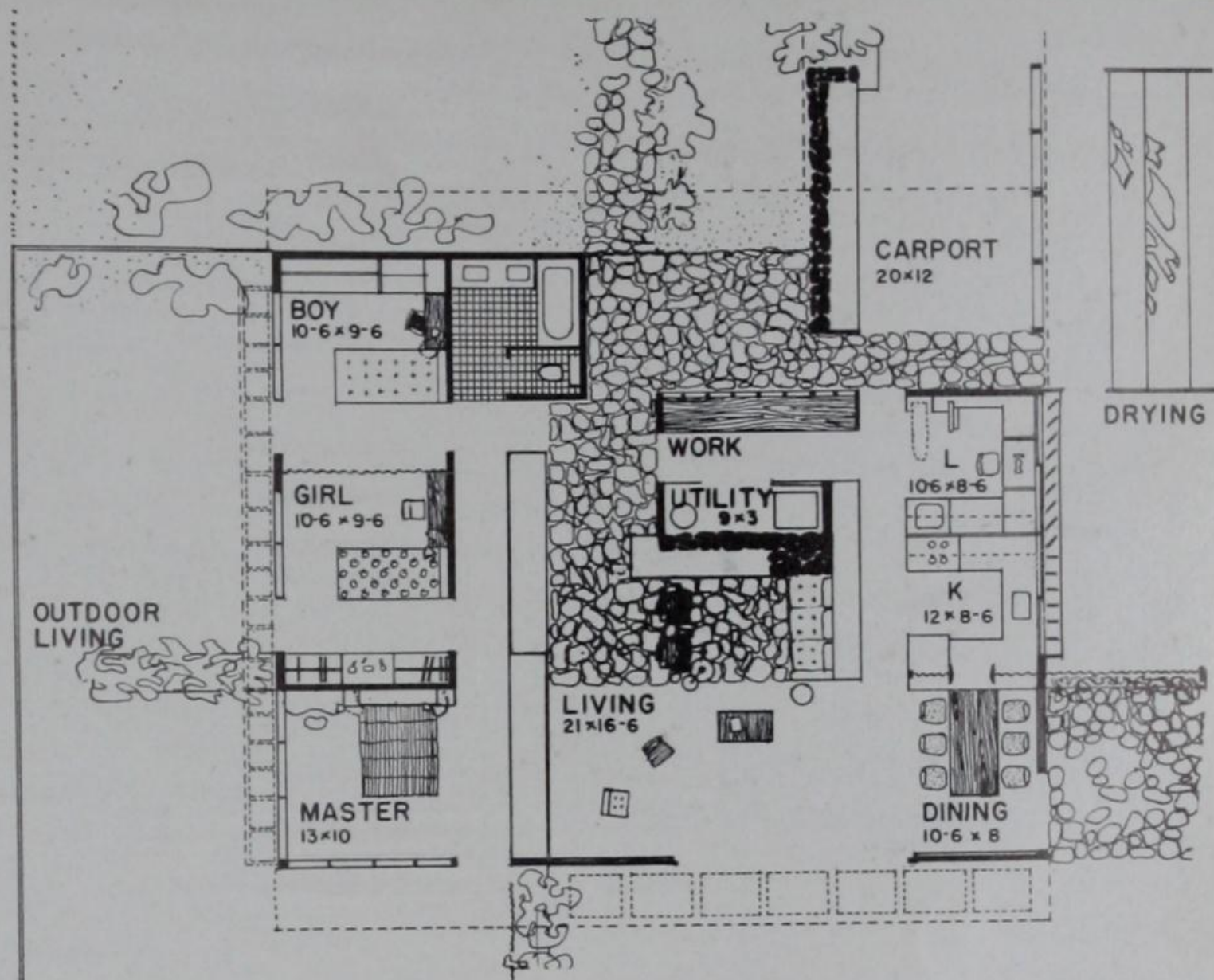


This house represents a simple, unaffected solution to the living problems of a typical 2-child family.

The house is notable for its domestic quality, and for the economical arrangement of the living, kitchen-utility, and sleeping areas.

The arrangement of the plot, and the relation of outdoor areas to separate indoor functions, is nicely worked out.

*Architects: Leon Hyzen and Allman Fordyce.*







★ ★ ★ *"PITTSBURGH" stands for Quality Glass and Paint* ★ ★ ★



GLASS &amp;

HOBBS

PLASTICS

IN YOUR NEW HOME  
... plan to use more *glass*

The living room fireplace is a wonderful spot for a big, unframed Plate Glass mirror. Install one over the mantel like this . . . and you're sure to have a living room you'll always be proud of.



... a little *extra glass*  
means a lot of *extra charm*

YOU'LL want your new home as attractive, as modern and as practical as possible . . . whatever its cost or style.

Pittsburgh Glass, in a wide variety of types and forms, can help you make it so. Pittsburgh Glass is gay and glamorous . . . permanent and completely practical. The smartness, style and charm you get for the few dollars invested will make your home truly modern. Just one or two simple applications of Pittsburgh Glass will make a tremendous difference in beauty and livability.

This folder shows only a few of the many ways in which glass can be used effectively and inexpensively to brighten your new house. Show the glass ideas that appeal to you to your architect or builder. He'll be glad to see that they're included in your "dream house."

**Kitchen Companion!** A simple, unframed mirror on the kitchen door gives you a quick check-up on your appearance when the doorbell rings . . . or before greeting guests.



Patterned  
Glass

Insulating  
Glass

Storefronts

Art Glass

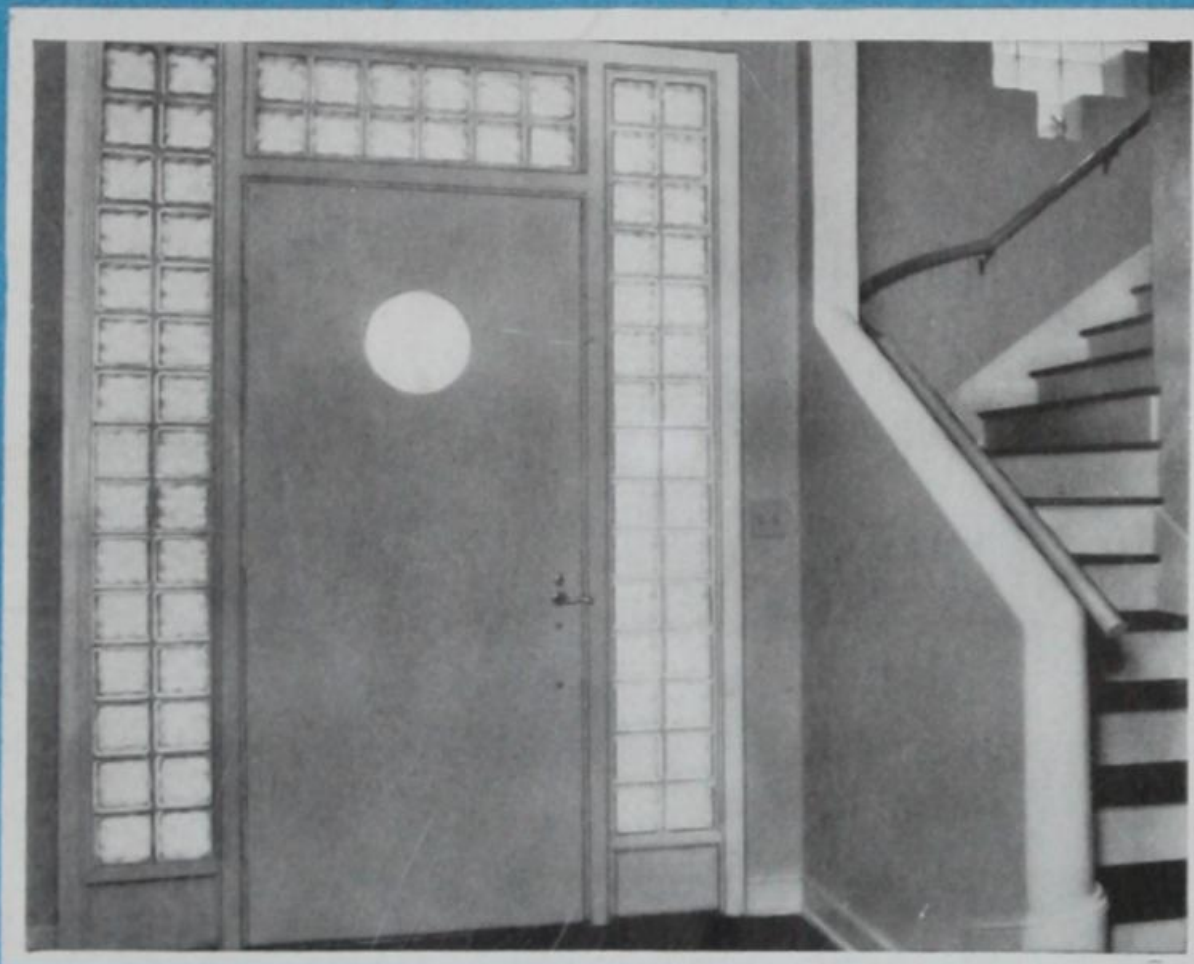
General Glass

Miscellaneous





**First aid** for dark kitchens! A row or two of PC Glass Blocks above the sink and work surfaces bring in daylight where you really need it . . . and look very smart, too.



**An entrance** framed with glass blocks is as practical inside the house as it is good-looking outside. For the blocks make your entrance hall well-lighted by day.



**A stair well** opening glazed with PC Glass Blocks brings in lots of light for the stairs, preserves privacy, shuts off unwanted views, perhaps, and adds to your home's beauty.

*"PITTSBURGH" stands for Quality Glass and Paint*



HOBBS GLASS LTD.

Branches Coast to Coast

Patterned  
Glass

Insulating  
Glass

Storefronts

Art Glass

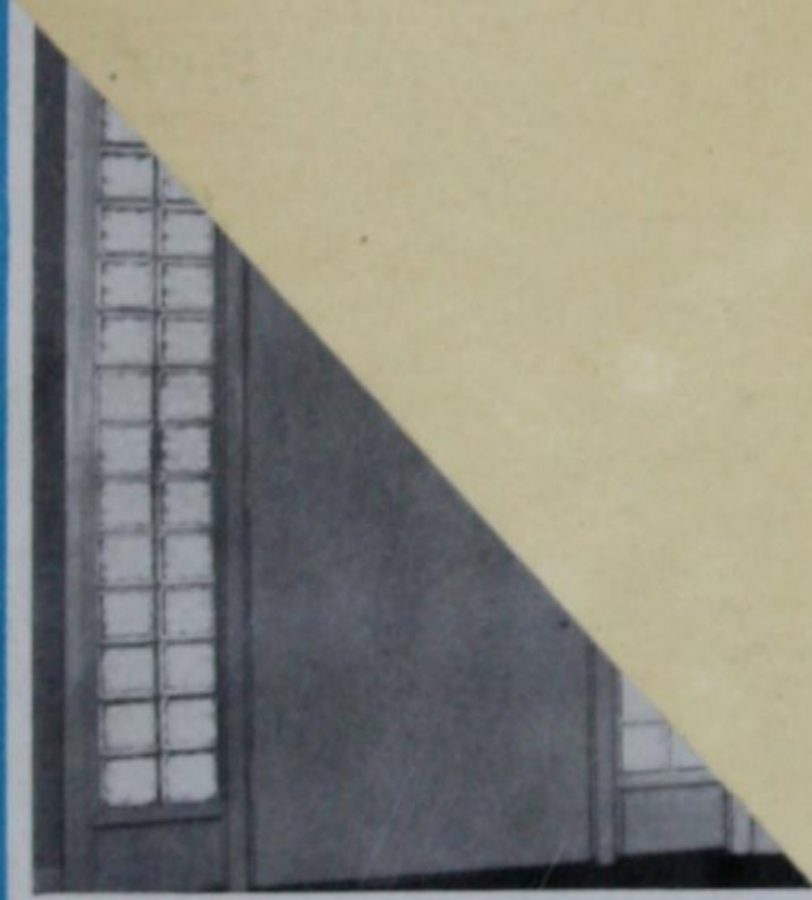
General Glass

Miscellaneous

ELITE

MISSISSIPPI





An entrance framed with glass blocks is as practical as it is good-looking outside. For the blocks make hall well-lighted by day.

*"PITTSBURGH" stands for Quality Glass and*



HOBBS GLASS LTD.

*Branches Coast to Coast*

STRUCTURAL  
CORRUGATED  
AND  
STRUCTURALITE  
GLASS  
BY MISSISSIPPI

Insulating  
Glass

Storefronts

Art Glass

General Glass

Miscellaneous



## THE STORY OF STRUCTURAL CORRUGATED GLASS

Architects and designers planning the New York World's Fair hit upon the idea of using corrugated glass to form the walls of a monumental fountain and also to create an ornamental fence. They prevailed upon the Mississippi Glass Company to make up the necessary sheets without the usual wire netting more as an accommodation than with any thought of this becoming a regular product.

From then on, a few modern-minded architects and designers in various parts of the country continued to request that we let them have a few sheets for some particular jobs. We finally realized that we had an item of wide appeal and tremendous usefulness. Here was an attractive glass that had great structural strength, permitting it to be used in large sheets that could be held in place with a minimum of support. For the first time entire walls could be made of translucent glass without a criss-cross of supporting members or mortar joints. We then offered Structural Corrugated Glass as a regular product and since that time it has shown a steady gain in popularity.

Structuralite, which has the same surface texture and pitch, was introduced as a companion product to be used in doors, transoms and such places where its overall thickness of approximately  $\frac{1}{2}$ " was better suited to the usual means of installation.

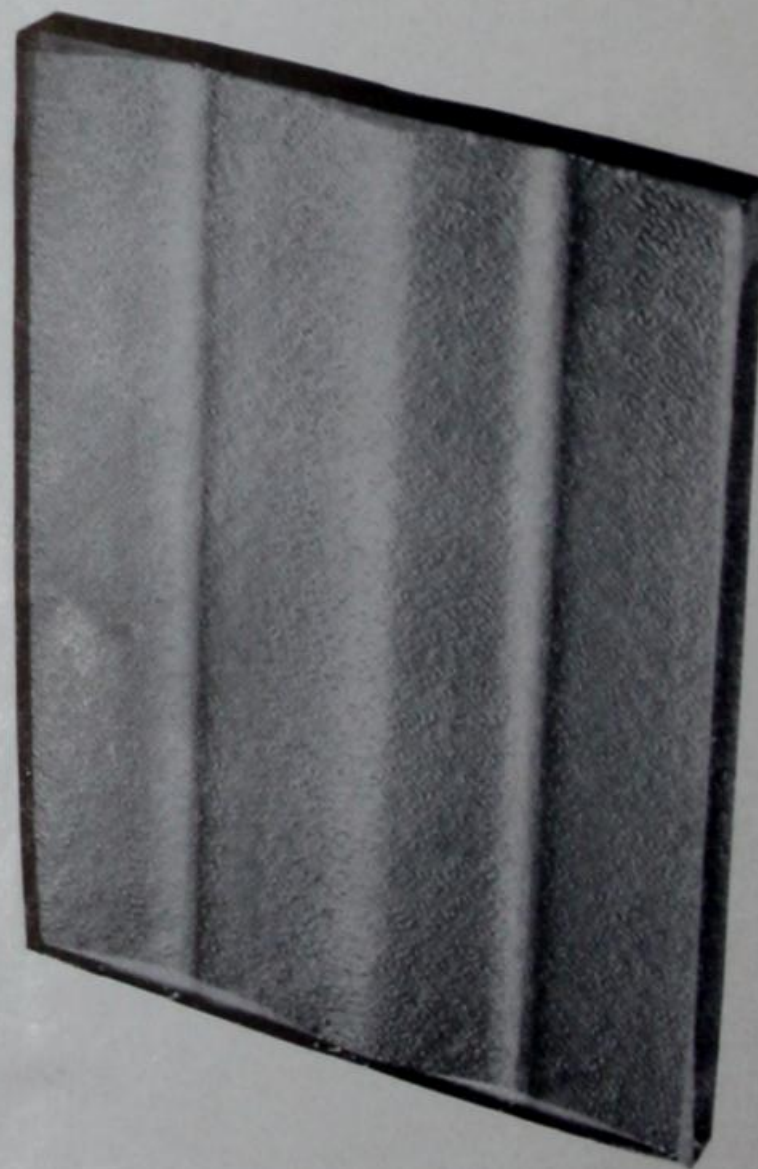
Designers and architects are constantly showing us new and interesting uses for these two types of glass and the following pages are intended to illustrate in a limited way the many intriguing possibilities in these new media of architectural expression.



STRUCTURAL CORRUGATED

HALF  
ACTUAL  
SIZE

See cover  
for full  
scale of  
texture



STRUCTURALITE

ALL SKETCHES AND SUGGESTED DETAILS ON FOLLOWING PAGES BY HARI VAN HOEFEN, A.I.A.



MISSISSIPPI  
**STRUCTURAL CORRUGATED  
 GLASS**

MODERN BEAUTY of this  
 New York sales room is enhanced by  
 daylighting panels of  
 Structural Corrugated Glass.



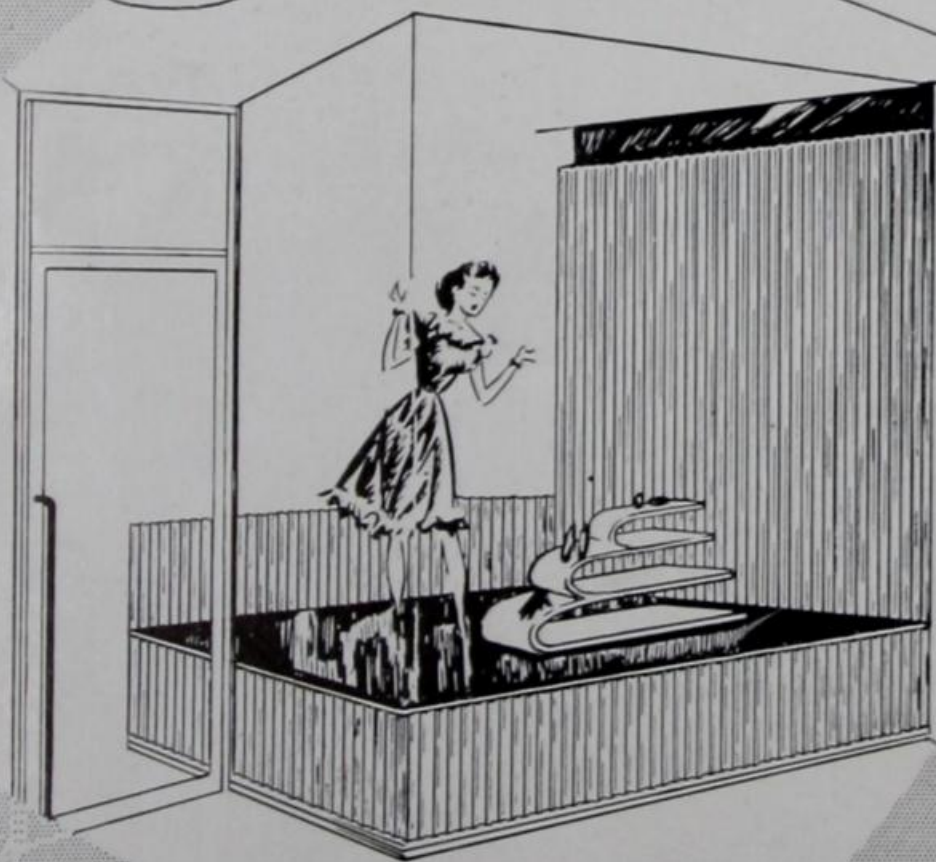
Insulating  
 Glass

Storefronts

Art Glass

General Glass

Miscellaneous



SUGGESTIONS FOR DRAMATIZING  
 THE OPEN VISION STORE FRONT





THE SIMPLICITY OF CONTEMPORARY DESIGN is carried out in the Structural Corrugated Glass in the Office of the Dean, College of Fine Arts, Syracuse University.

SPARKLING BALUSTRADES THAT WOULD LIFT ATTENTION TO UPSTAIRS AREAS



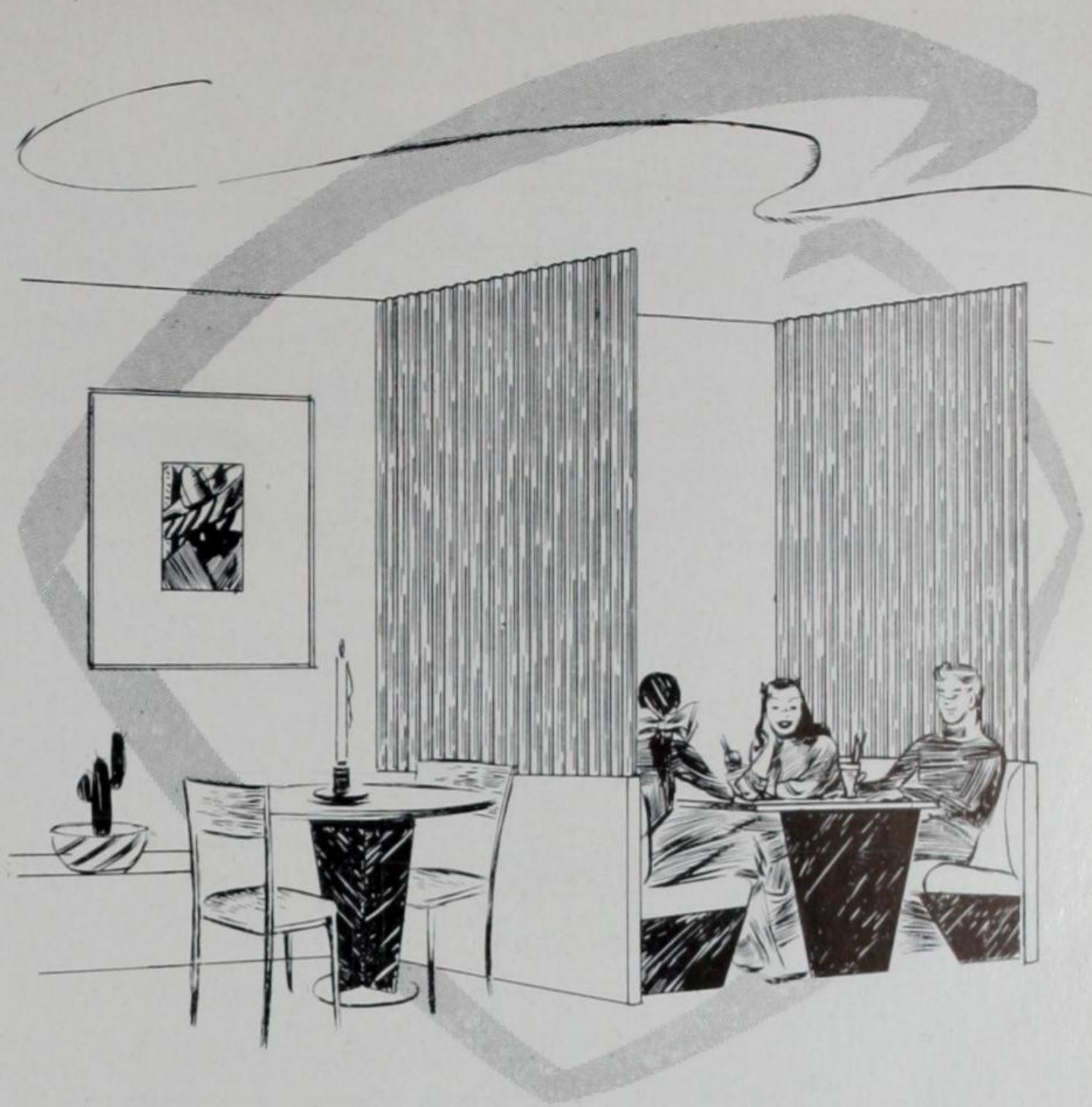


MISSISSIPPI  
STRUCTURAL CORRUGATED  
GLASS

5

SHAFTS OF REFRACTED  
LIGHT MAKE SMART  
BOOTH DIVIDERS

SOFT GLARE REDUCING FINISH on  
Structural Corrugated Glass produces  
a perfect background for brightly  
lighted shadow boxes in this Manhattan  
candy shop.



Insulating  
Glass

Storefronts

Art Glass

General Glass

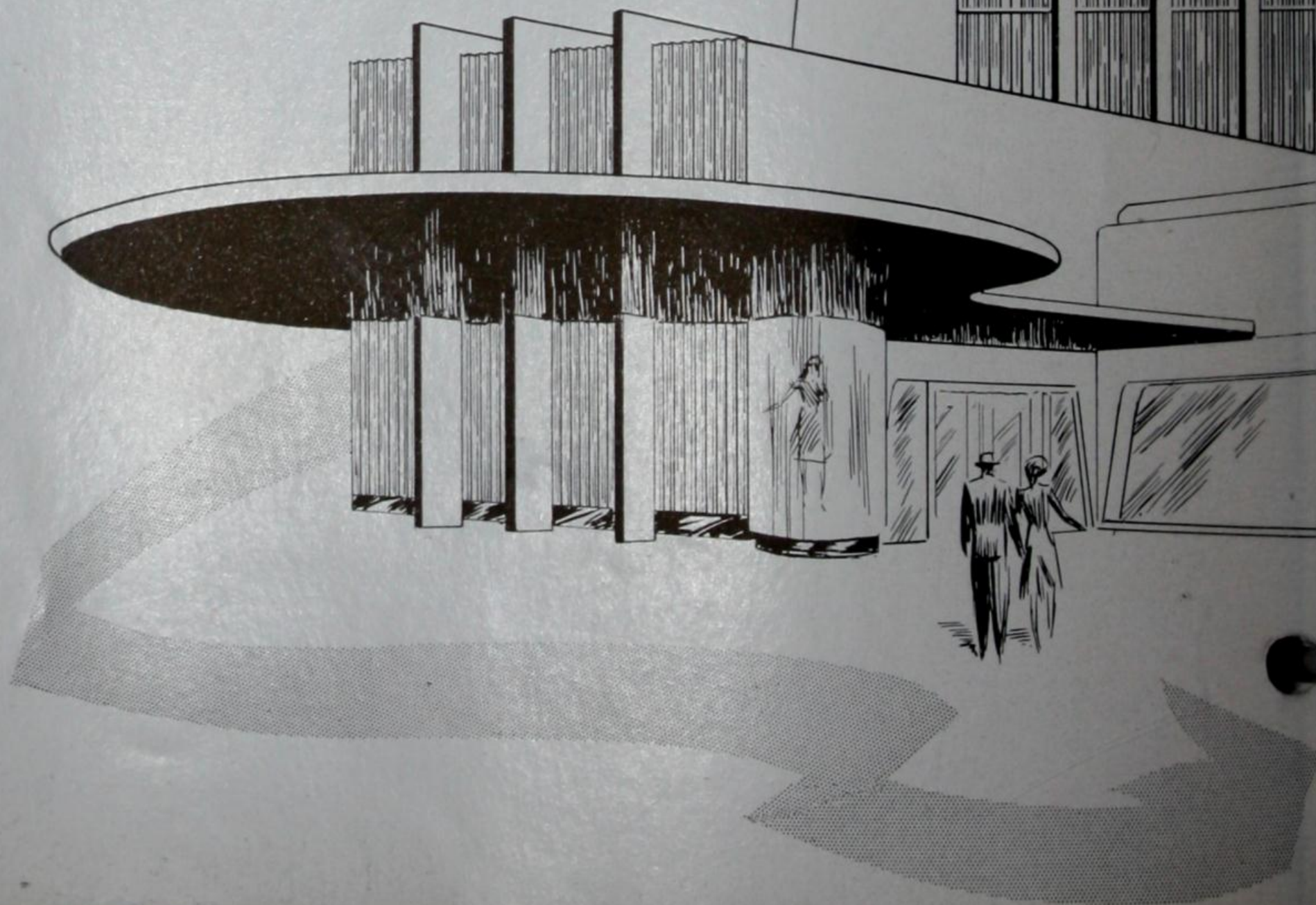
Miscellaneous





CLEAN-CUT FRESHNESS of Structural Corrugated Glass is shown in these counters in a Milwaukee mercantile establishment.

BRIGHT  
VERTICAL  
LINES FOR  
HEIGHT





# STRUCTURAL CORRUGATED GLASS

ATTENTION IS CENTERED into  
the dress salon of this Long  
Beach department store with  
panels of Structural Corrugated  
Glass.



UNLIMITED POSSIBILITIES  
IN FINE GLASS FURNITURE



Insulating  
Glass

Storefronts

Art Glass

General Glass

Miscellaneous



MISSISSIPPI

# STRUCTURAL CORRUGATED GLASS

LIGHT AND GAY PANELS  
TO PROJECT DISPLAYS  
INTO SALES AREAS



dresses

STRUCTURALITE GLASS  
DOORS are attractive and  
inviting.

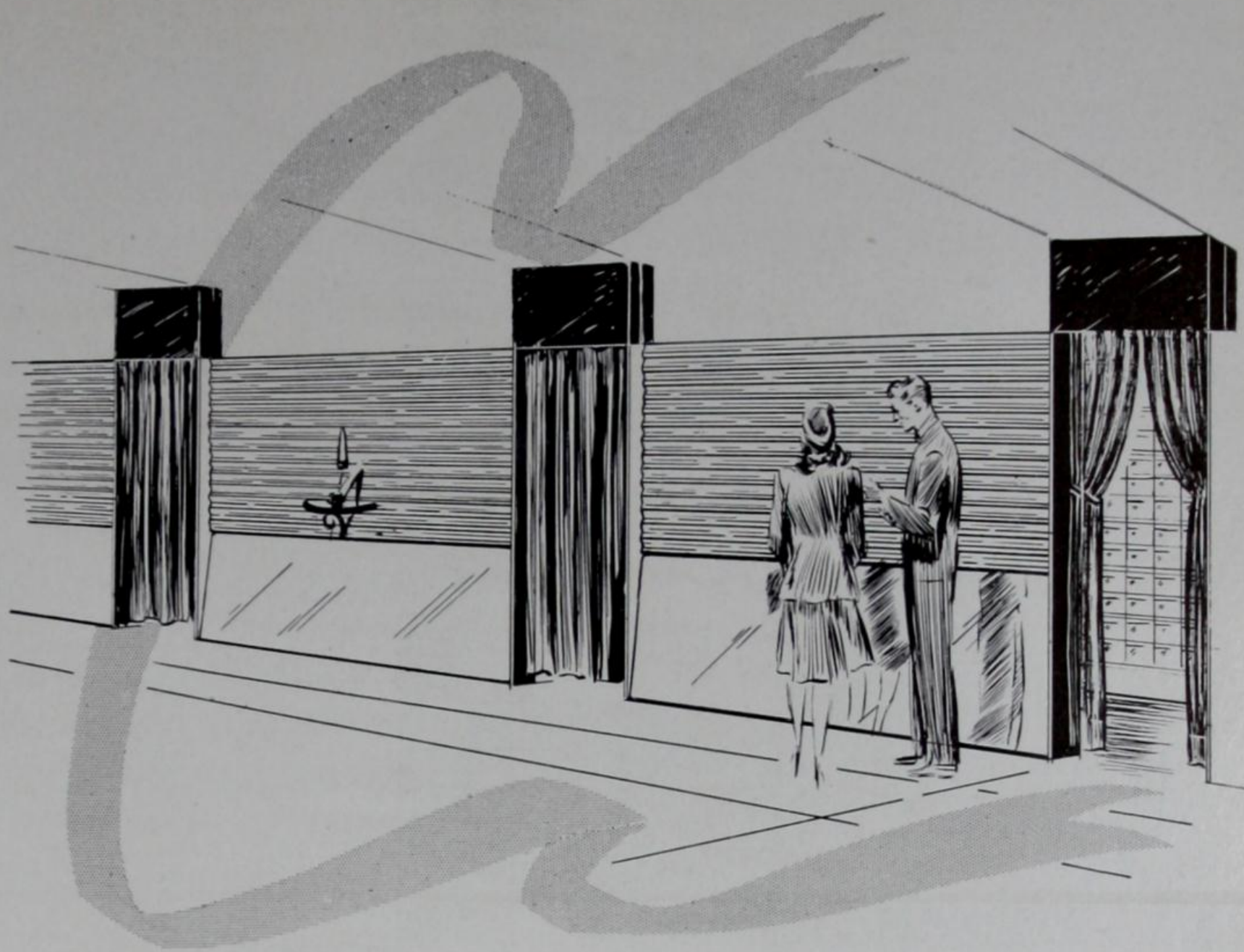


SHAFT OF CRYSTAL formed  
by eight mitered panels of  
Structural Corrugated Glass  
in fine old Kansas City de-  
partment store. This idea is  
even more effective when  
supporting columns are first  
sheathed with bright aluminum  
foil.



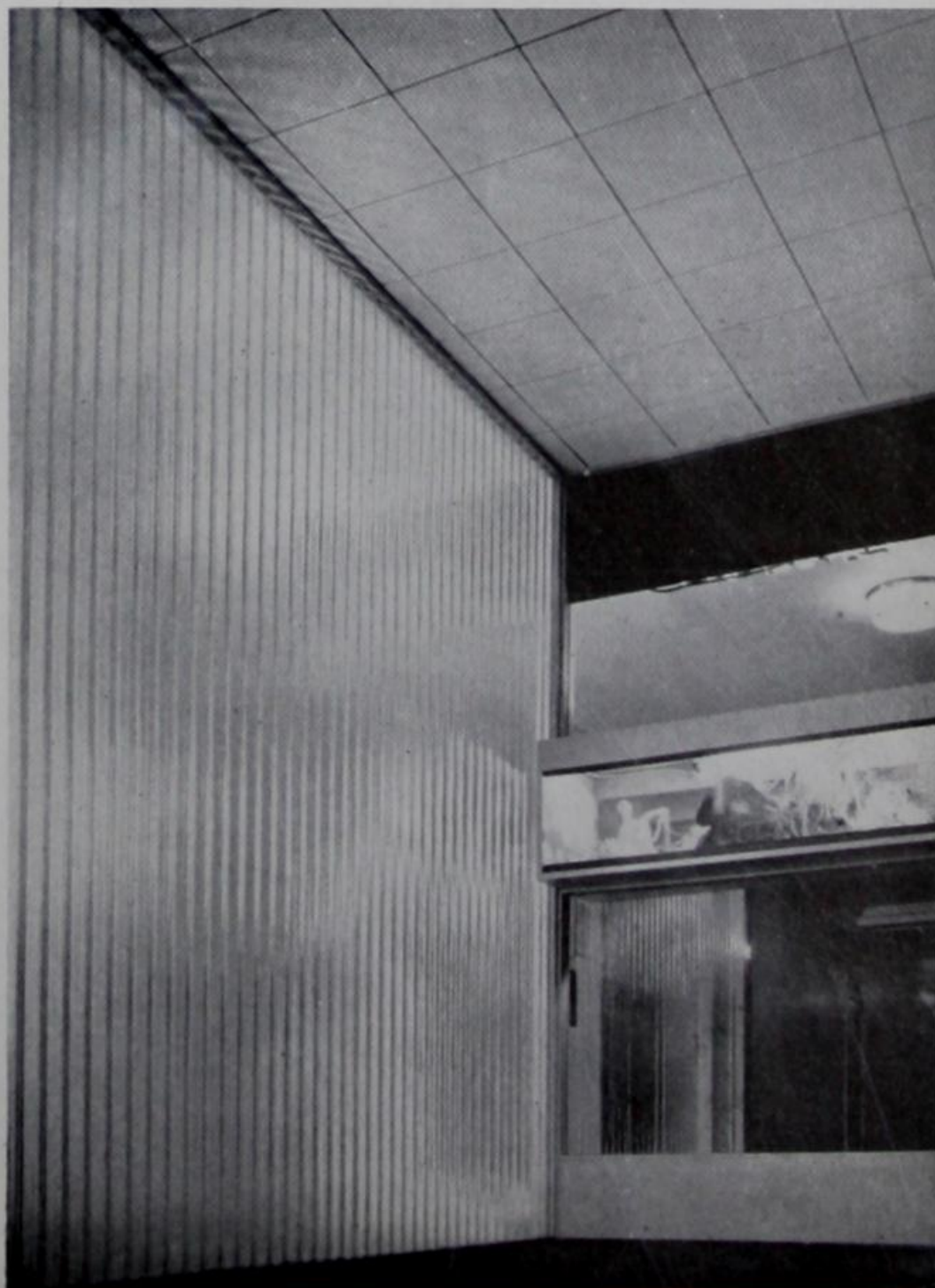


SALON TYPE STORES  
EVOLVE FROM WELL  
PLACED GLASS SCREENS



NEAT AND ATTRACTIVE PANELS of Structural Corrugated Glass carry out modern lines of this eastern wholesale house.

AN ENTIRE WALL of Structural Corrugated Glass tends to expand hallway to beauty salon of the Sherman House.



Insulating  
Glass

Storefronts

Art Glass

General Glass

Miscellaneous

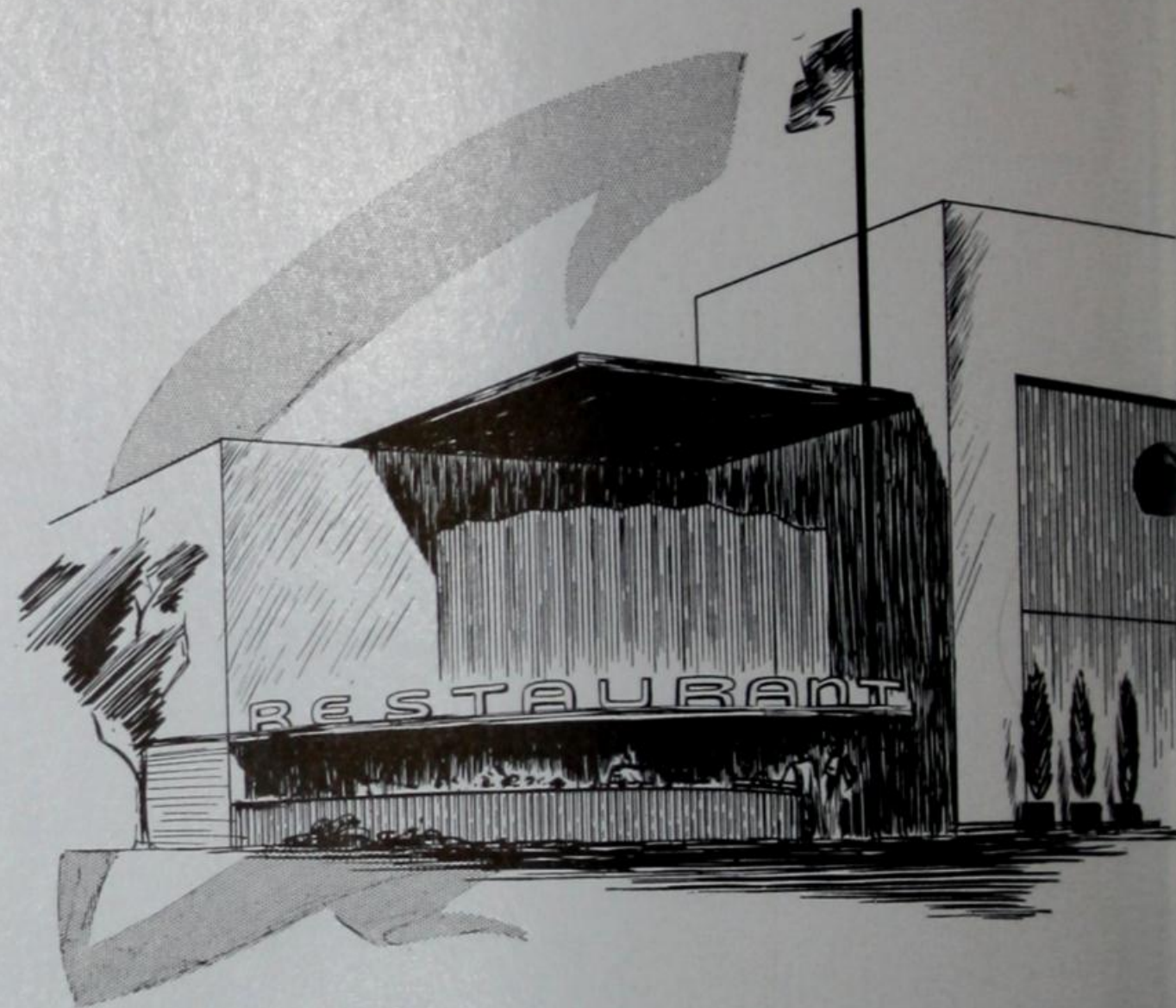


# STRUCTURAL CORRUGATED GLASS



SILVERED STRUCTURAL CORRUGATED GLASS in one wall reflects the light transmitted by the other in an interesting ramp.

FOR BRIGHT AND  
DRAMATIC FACADES



ILLUMINATED STRUCTURAL CORRUGATED GLASS lends charm and gaiety to the Carousel Lounge in the Essex House, Newark.



OPEN VISION FRONT of this fine Miami store is made even more attractive by borders of illuminated Structural Corrugated Glass.



SHADOW BOX WINDOWS set into Structural Corrugated Glass with Glare Reducing Finish permit nicely restricted view into Oklahoma City cafe. Vertical neon tubes throw pastel shades into the mat surface glass.



Insulating  
Glass

Storefronts

Art Glass

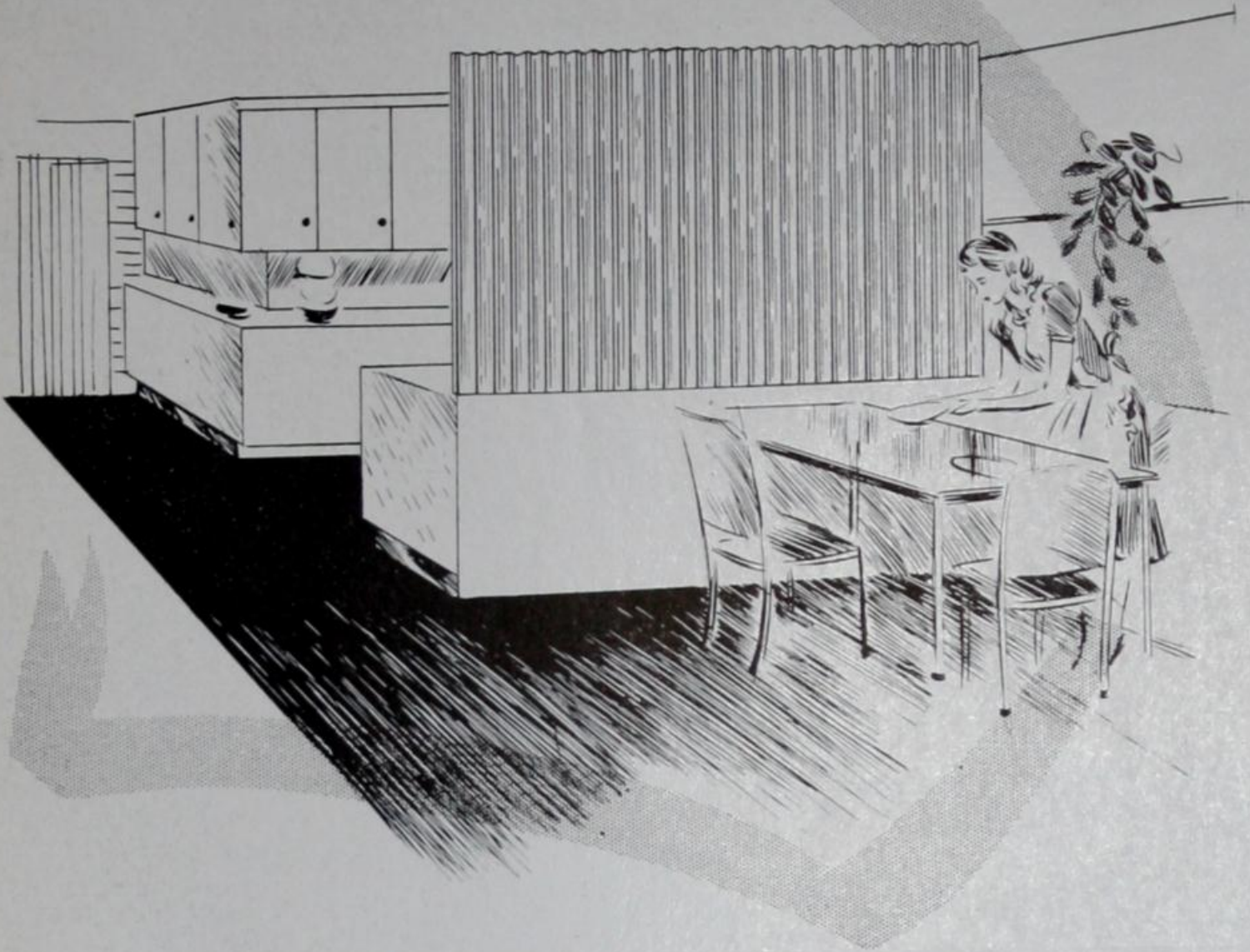
General Glass

Miscellaneous



# STRUCTURAL CORRUGATED GLASS

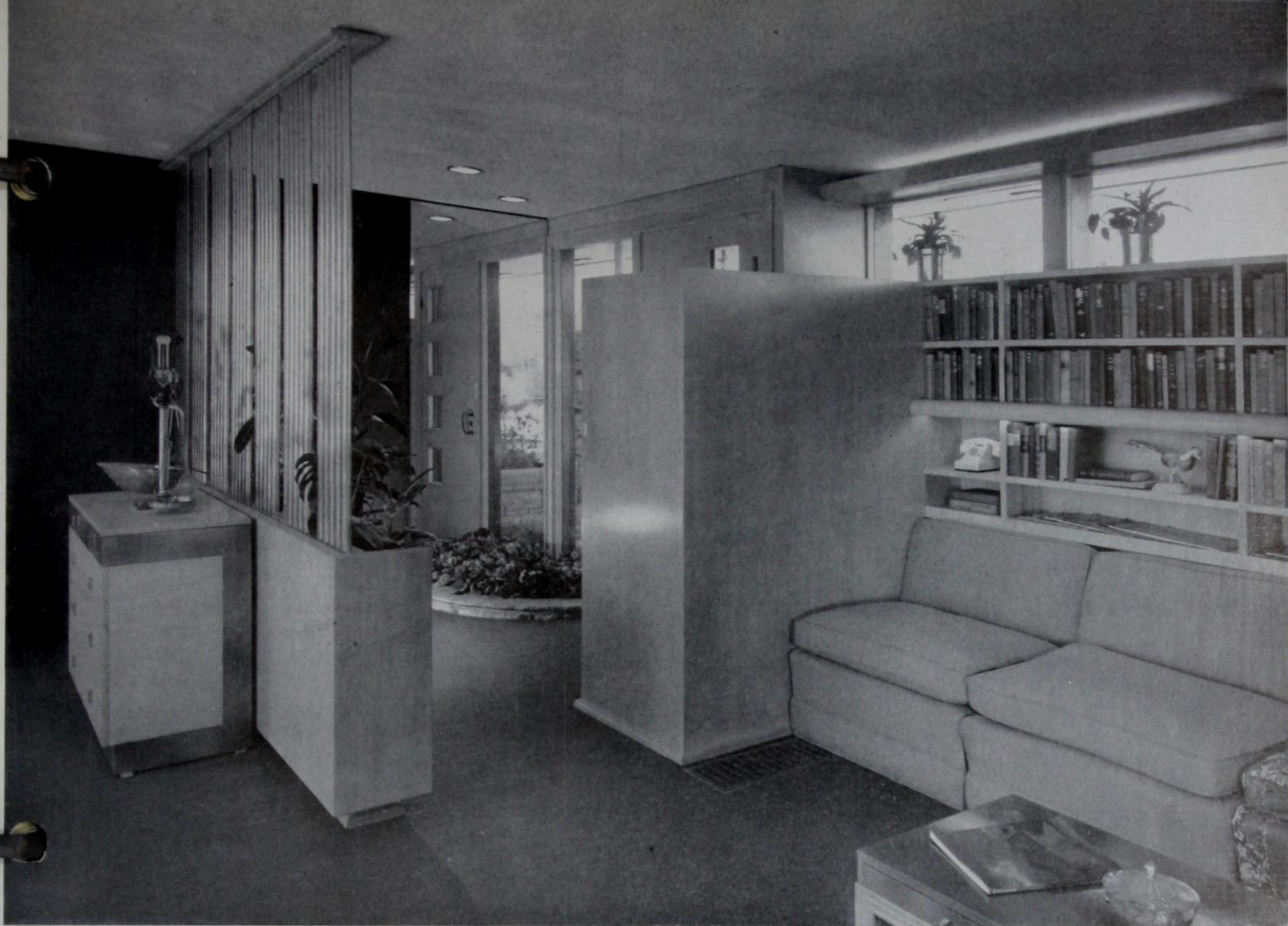
FUNCTIONAL DESIGN  
INDICATES EASILY  
CLEANED WALLS OF  
TEXTURED GLASS



A LIGHT AND CHEERY PANEL  
Structural Corrugated Glass produces  
daylighting effect and obscures  
unattractive view in the rumpus room

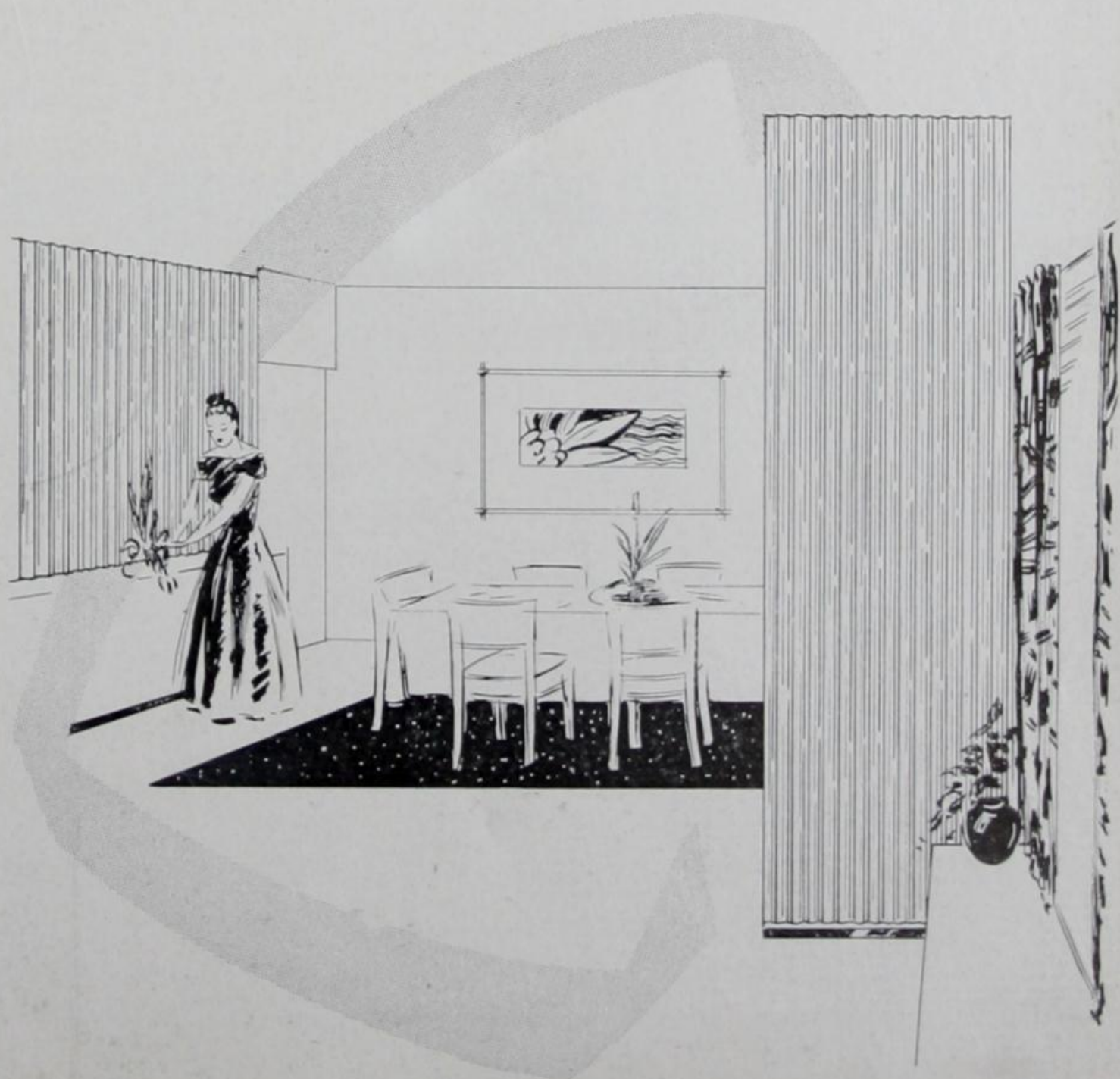






THE NOTED POST-WAR HOUSE in  
Los Angeles utilizes shafts of Structural  
Corrugated Glass to screen the entry  
hall.

WALLS OF TRANSLUCENT  
CRYSTAL TO SEPARATE  
VARIOUS LIVING AREAS  
OF THE MODERN HOME



Insulating  
Glass

Storefronts

Art Glass

General Glass

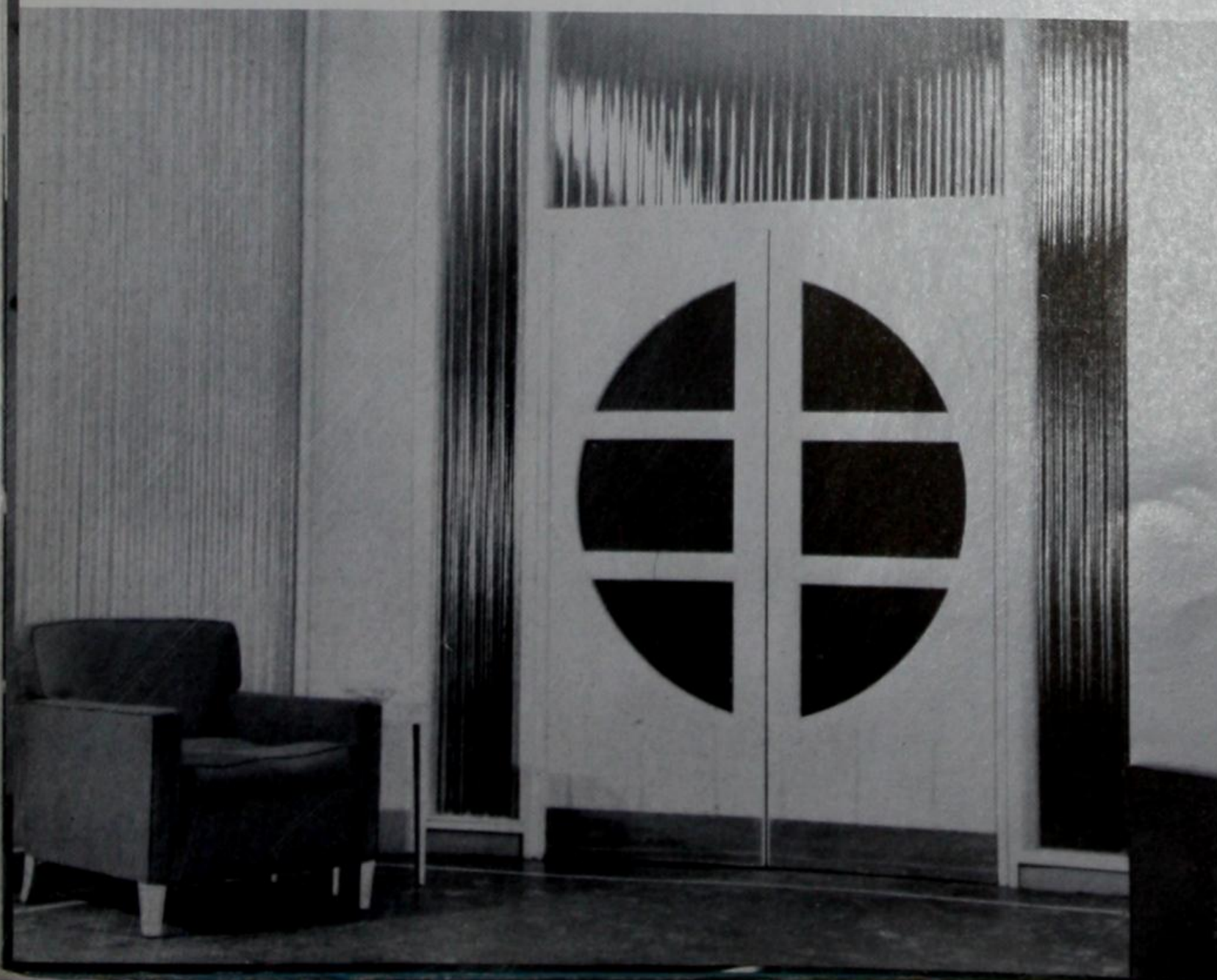
Miscellaneous





AN EXPANSE OF CHEERFUL DAYLIGHT  
floods into this Sherman Hotel suite  
through Structural Corrugated Glass.

SPARKLING GLASS VALANCES  
AND DRAPERY EFFECTS TO  
FRAME OPENINGS



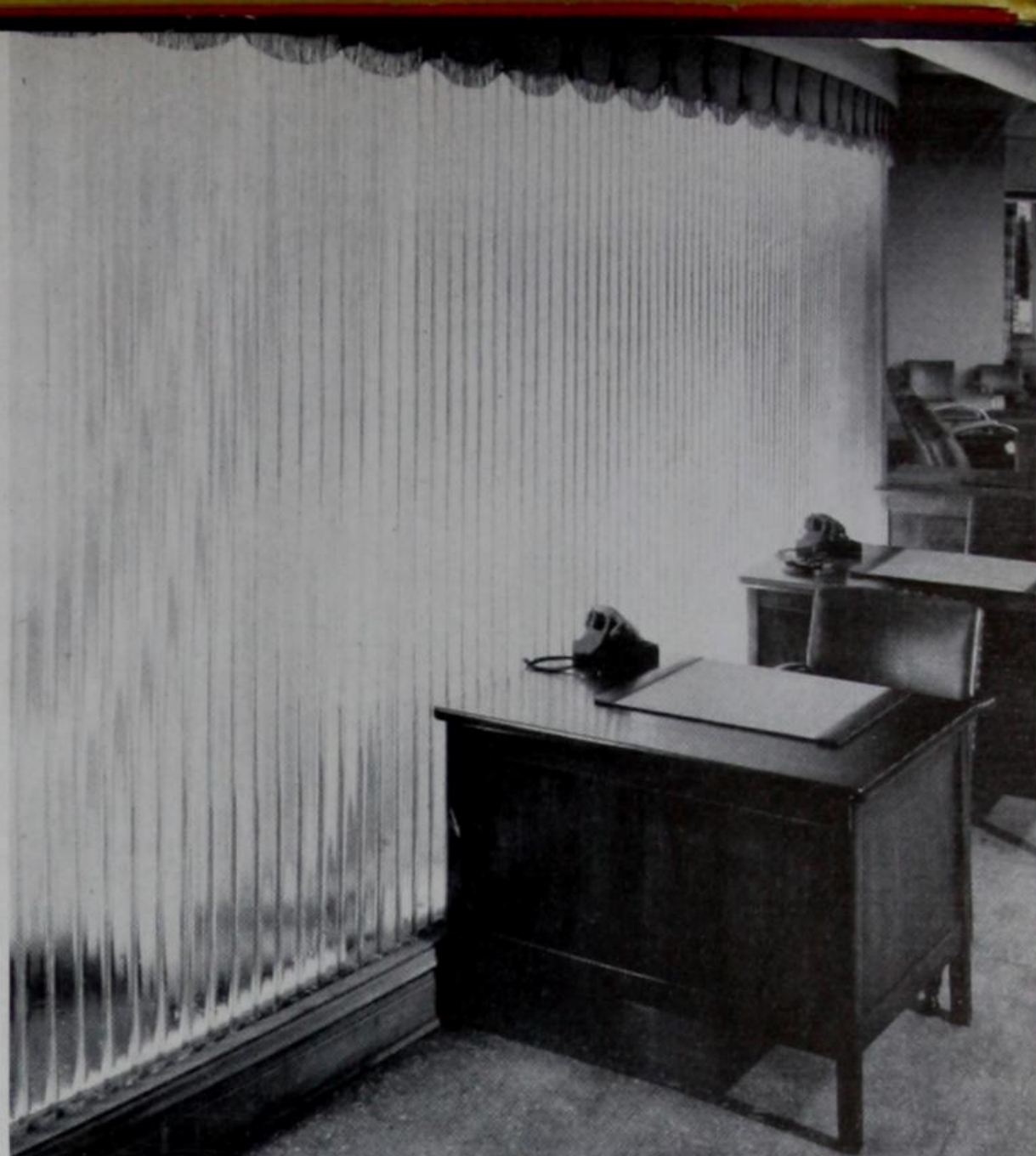
INVITING DIGNITY and fine  
quality are keynoted in door-  
way framed with Structural  
Corrugated Glass.



MISSISSIPPI  
STRUCTURAL CORRUGATED  
GLASS

15

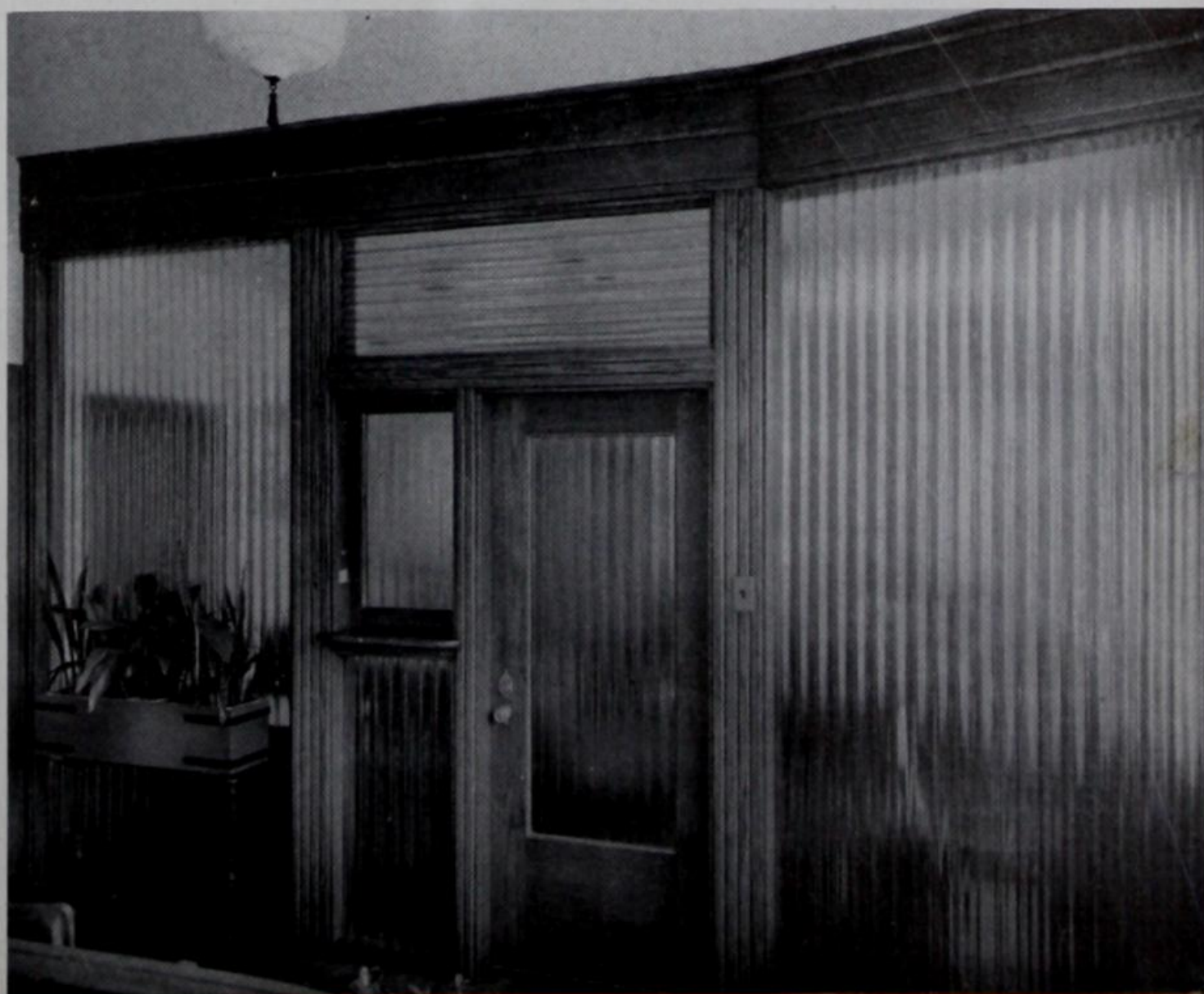
SEGMENTS MITERED INTO CURVE form continuous wall of Structural Corrugated Glass in this mid-western office supply establishment.



NICHE LIGHTING PANELS  
TO SIMULATE WINDOWS AND  
BRIGHTEN A DARK HALL



STRUCTURALITE GLASS DOORS are in perfect harmony with the Structural Corrugated Glass walls in St. Louis millwork concern's office.



Insulating  
Glass

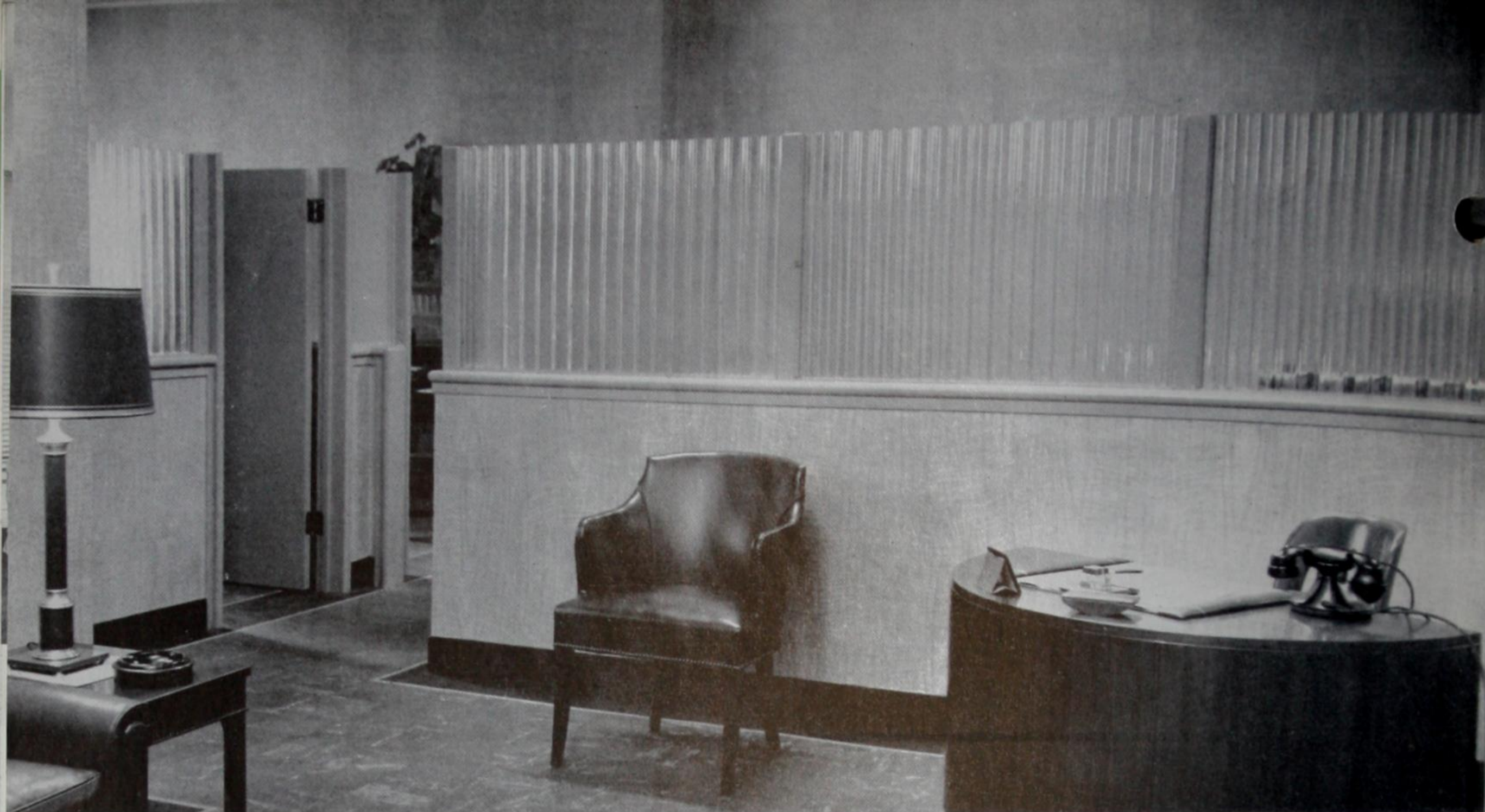
Storefronts

Art Glass

General Glass

Miscellaneous





UNTREATED SURFACES

THREE SURFACE FINISHES are shown in these three offices. By these treatments the degrees of obscurity can be varied to suit the requirements of the individual rooms.

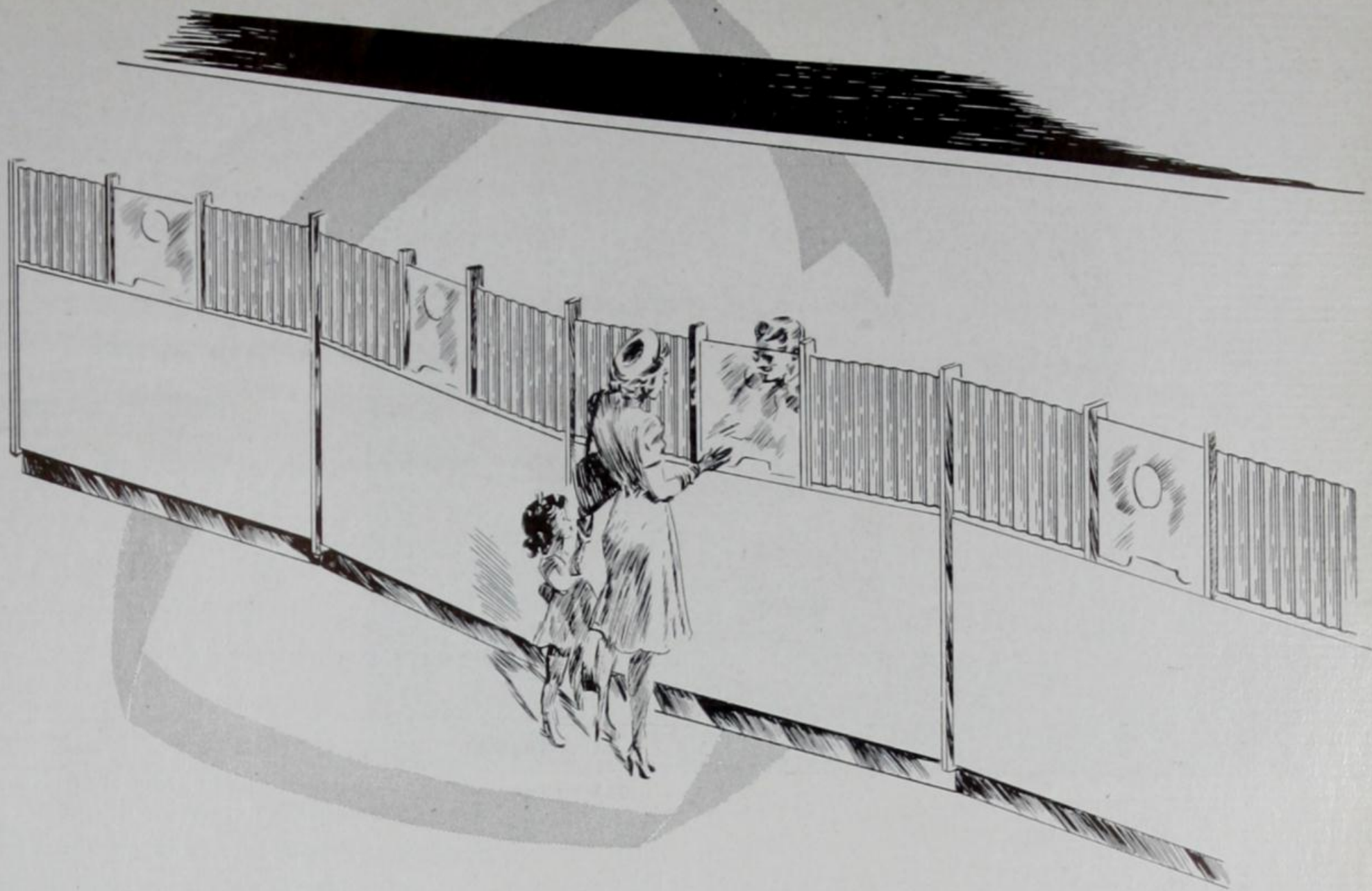
ONE SURFACE SANDBLASTED





MISSISSIPPI  
**STRUCTURAL CORRUGATED**  
**GLASS**

TO ACHIEVE  
THE EFFECT  
OF FRIENDLY  
PRIVACY



"GLARE REDUCING", ACID ETCHED, SURFACES



Insulating  
Glass

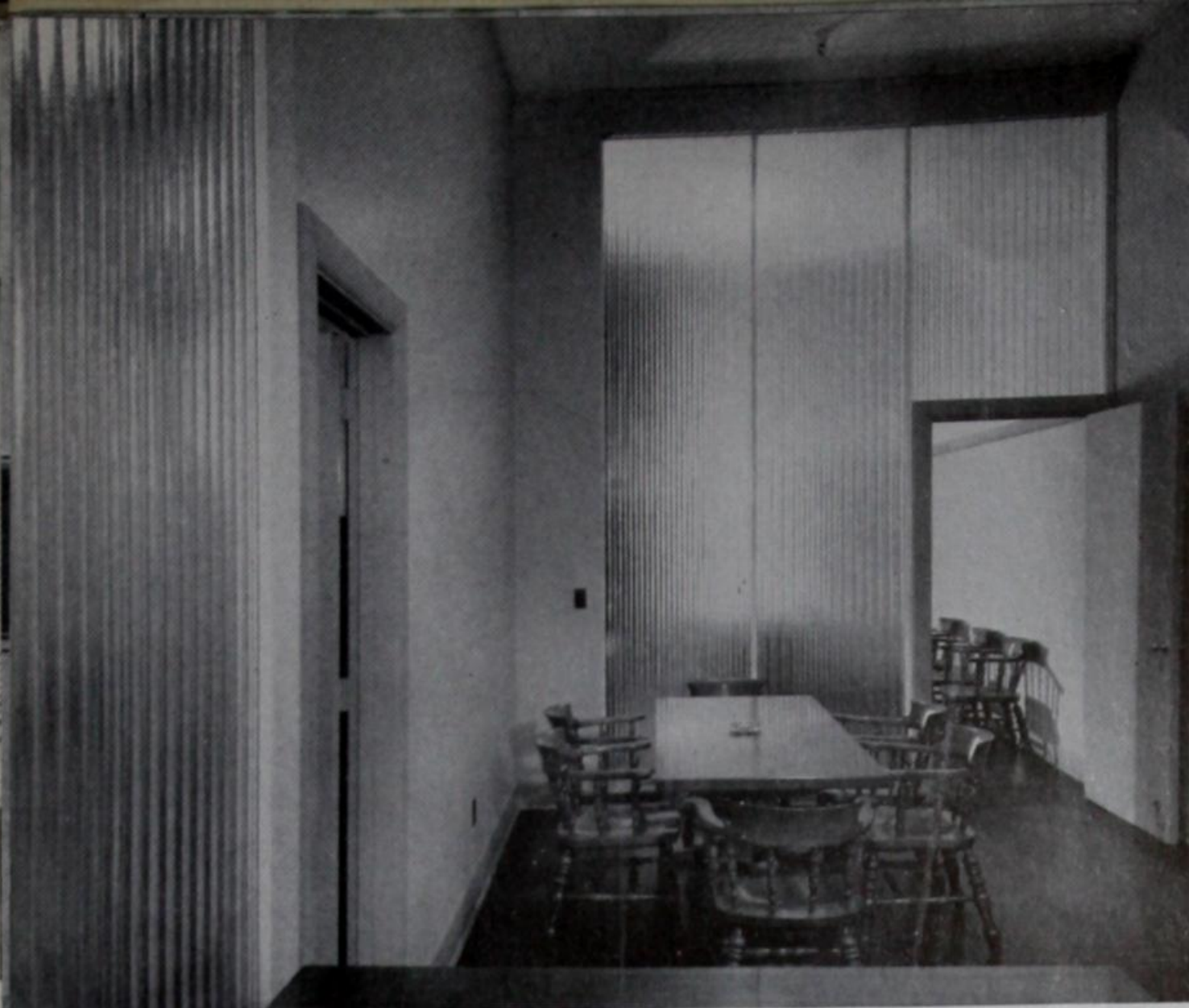
Storefronts

Art Glass

General Glass

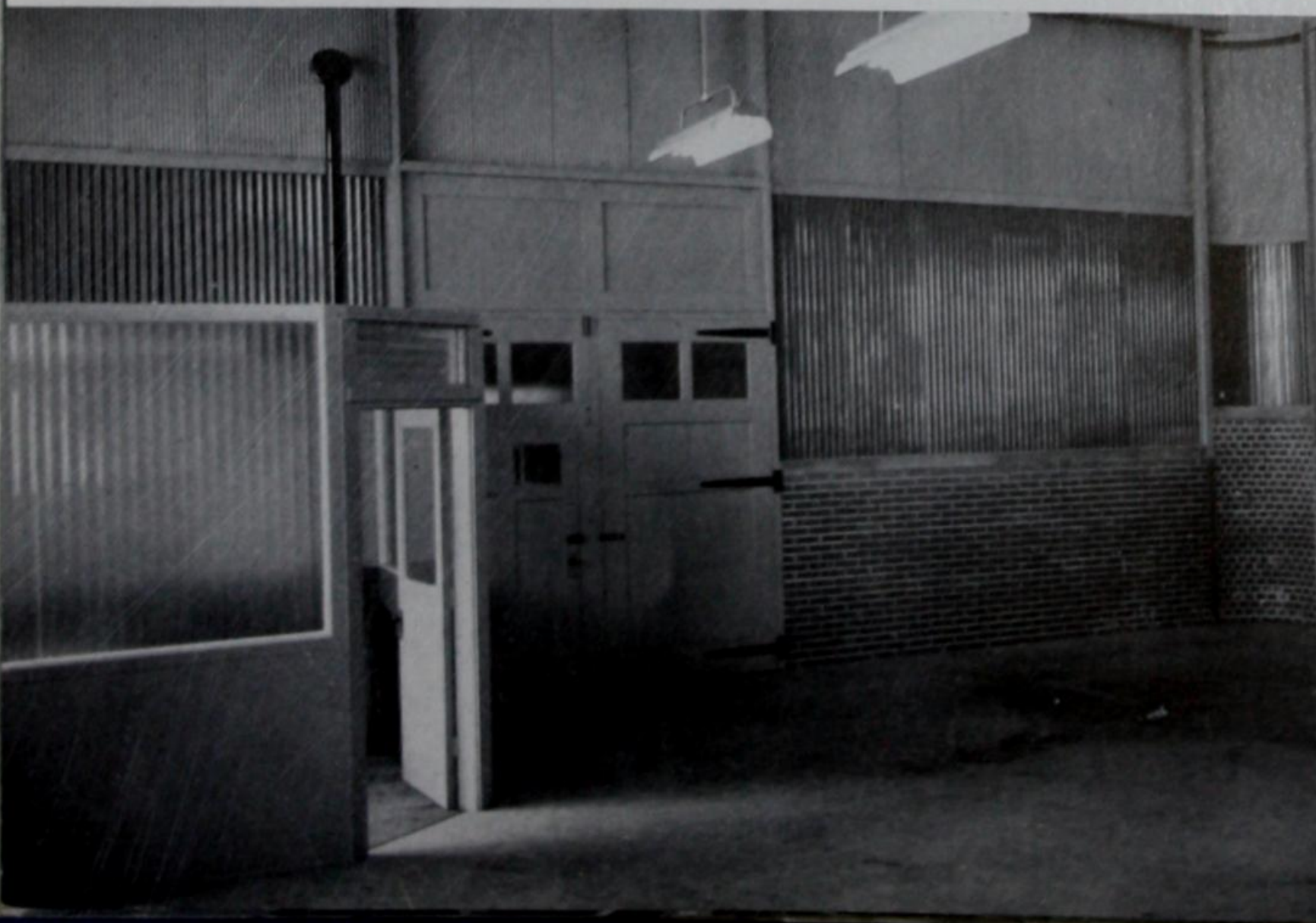
Miscellaneous





NEAT, EASILY CLEANED PANELS of Structural Corrugated Glass have practical application in conference room in Syracuse.

UNLIMITED BACKGROUND  
EFFECTS IN REFRACTED  
LIGHT AND COLOR

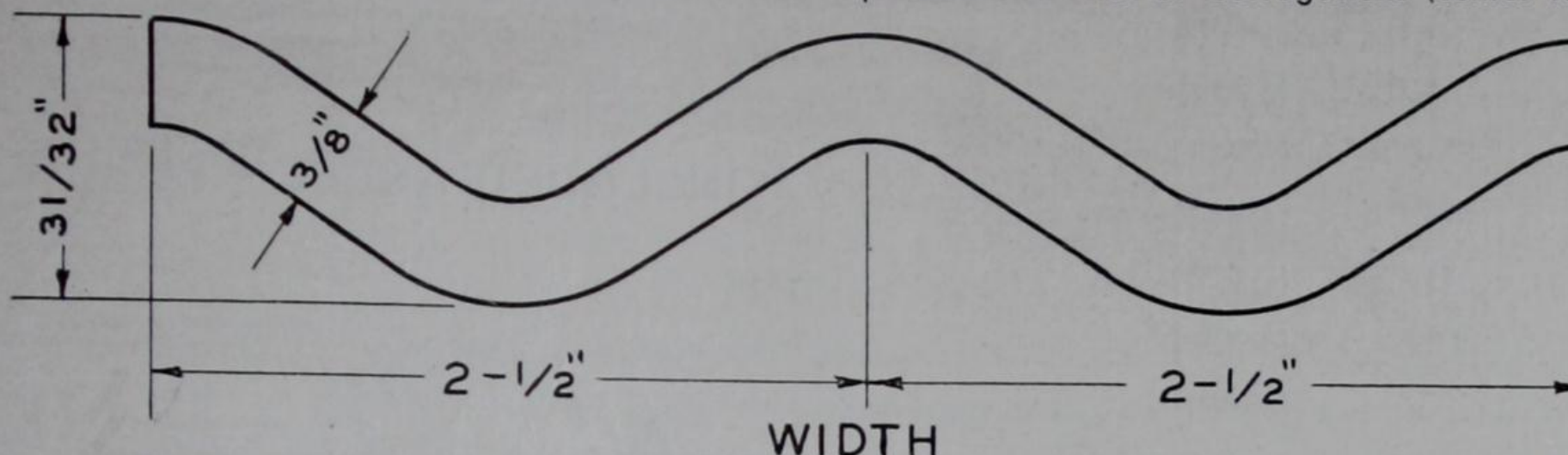


PRACTICAL UTILITY of Structural Corrugated Glass for wall panels and office partitions is exemplified in this plant laboratory.



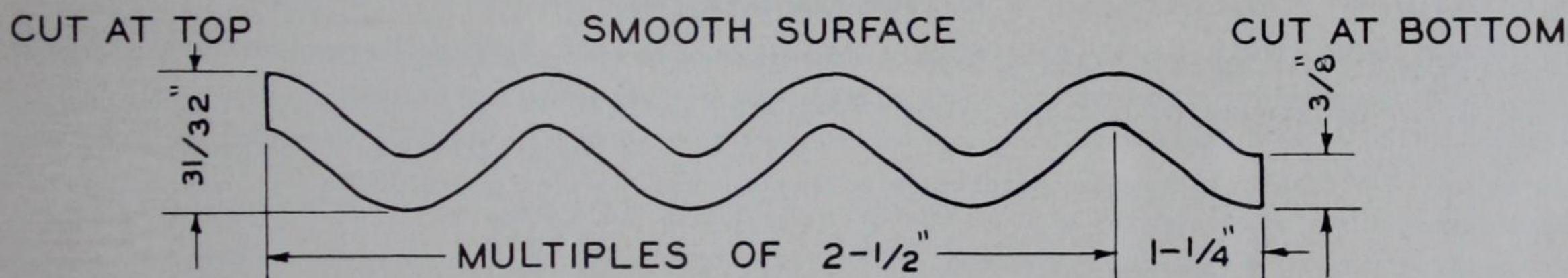
## I. GENERAL CONSIDERATIONS

(1) SPECIFICATIONS: Maximum width: 50" — Maximum length: 144". Thickness of Glass, approx.:  $\frac{3}{8}$ " — Overall Depth approx.:  $\frac{31}{32}$ ". Approx. Weight, lbs. per sq. ft.: unpacked 6.3 — packed 8.2. Pitch of Corrugations (center to center):  $2\frac{1}{2}$ "



(2) PRACTICES TO BE OBSERVED IN ORDERING: The first dimension (width) is across the corrugations. The second dimension (length) is parallel to the corrugations. The standard widths are 25" and 50". Our price to the distributor is based on these standard widths; a light under 25" wide is billed as though it were 25" wide, and a light between 25" and 50" wide is billed as being 50" wide. "Combination" widths are not furnished as such; for example, a light 30" wide and one 20" wide will not be supplied as one 50" light, but will be charged for as one light 50" wide and one 25" wide. Lengths are charged at the actual length furnished (fractions raised to the next inch).

Measuring and cutting are always done on the smooth surface. Cutting to width (splitting) is ordinarily done on the top of a corrugation, resulting in widths that are multiples of  $2\frac{1}{2}$ ". When necessary, cuts can be made along the bottom of a corrugation, yielding widths that are multiples of  $1\frac{1}{4}$ ", but this cutting results in the two sides lying in different planes.



Splitting can be done at any part of the sheet but this always results in either a flare or a cut-back that must be ground off. We make an extra charge for edge-grinding of any light cut on the slope of the corrugation. Slope-cut edges cannot be butt joined.

## (3) DIMENSIONAL TOLERANCES:

Width Tolerance.

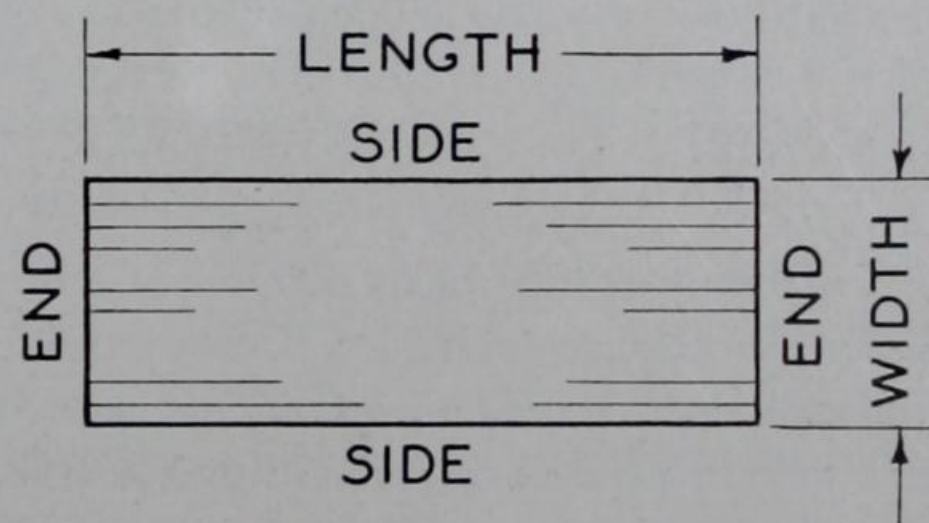
With cut sides: Plus or minus  $\frac{1}{8}$ "

With ground sides: Plus or minus  $\frac{1}{16}$ "

Length Tolerance.

With cut ends: Plus or minus  $\frac{3}{16}$ "

With ground ends: Plus or minus  $\frac{1}{8}$ "



## II. EDGEWORK

(1) CUT EDGES: So-called "clean cut" edges cannot be furnished; factory cut edges will usually contain some spalls, projecting points and cut-backs.

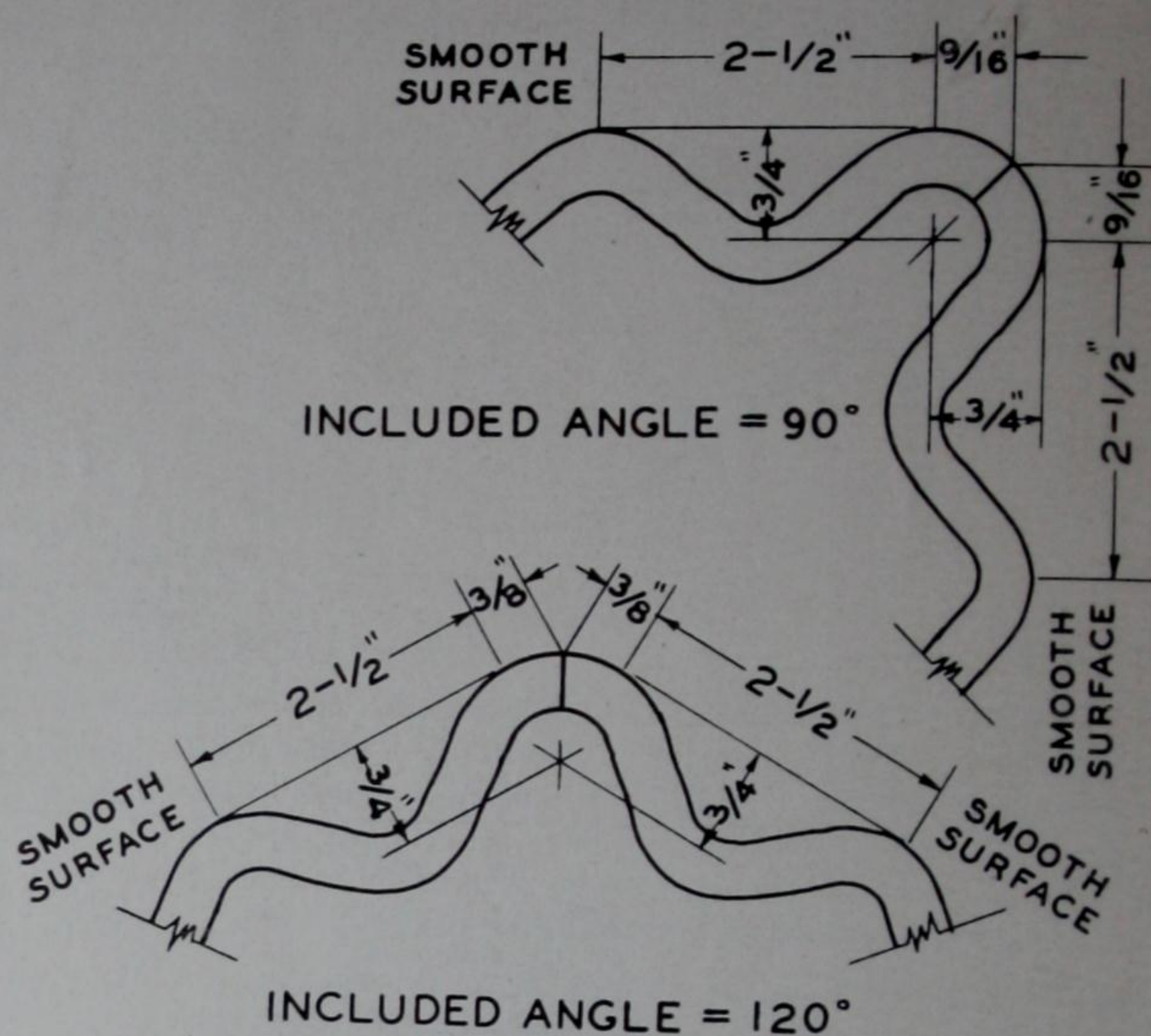
(2) GROUND EDGES: All edges can be furnished flat ground, but are subject to some spalls. We cannot furnish seamed or polished edges, but distributors may be able to do such work.

(3) MITERED EDGES: The sides (parallel to the corrugations) can be furnished miter ground to any reasonable angle. Miterring a side, to turn a corner or form a circular arc, of necessity increases the overall width of the glass (beyond the top of a corrugation) as the miter grinding cannot be done at the top or bottom of a corrugation. The angle is turned about a point  $\frac{3}{4}$ " from the surface of each light. As the included angle decreases, the width of the glass increases, as shown in following table (The amount



of increase in width is the sine of  $\frac{1}{2}$  of the included angle  $\times \frac{3}{4}$ ". Measurements and cuts are made on the smooth surface. If it is absolutely necessary to have the smooth surfaces on the included side of the angle, measurements and cuts can be made on the rough surface, but the resulting edgework may be inaccurate and inferior.

Included Angle	Increase in Width Nominal	(Actual)
180°	0"	
170°	$\frac{1}{16}$ "	(.0654)
160°	$\frac{1}{8}$ "	(.1302)
150°	$\frac{3}{16}$ "	(.1941)
140°	$\frac{1}{4}$ "	(.2565)
130°	$\frac{5}{16}$ "	(.3170)
120°	$\frac{3}{8}$ "	(.3750)
110°	$\frac{7}{16}$ "	(.4302)
100°	$\frac{1}{2}$ "	(.4821)
90°	$\frac{9}{16}$ "	(.5303)
80°	$\frac{9}{16}$ "	(.5745)
70°	$\frac{5}{8}$ "	(.6144)
60°	$\frac{5}{8}$ "	(.6495)



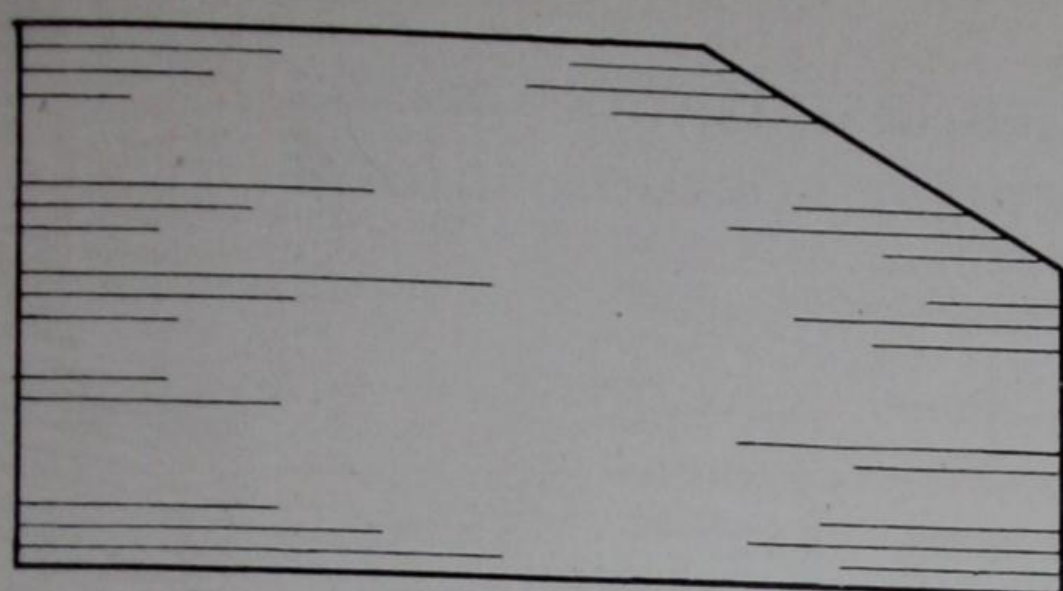
### III. SURFACE TREATMENT

- (1) **GLARE REDUCING FINISH:** Glare reducing finish, on both surfaces only, can be furnished in sizes up to a maximum of 30" x 136". The factory's charge for this finish is based on the actual size furnished without regard to the standard widths. There has been some criticism of the variations in texture of Improved Structural Corrugated glass with the glare reducing finish, especially in large sizes. With either or both surfaces sandblasted, on the other hand, this glass is conceded to present a most attractive appearance.
- (2) **SANDBLASTING:** Either or both surfaces can be furnished sandblasted in sizes up to 50" x 144". The factory's charge for sandblasting is based on the size furnished without regard to the standard widths.
- (3) **PAINTING:** Improved Structural Corrugated glass that will be exposed to the sun, or that is close to radiators, should never be painted. Breakage may occur when this instruction is not heeded.

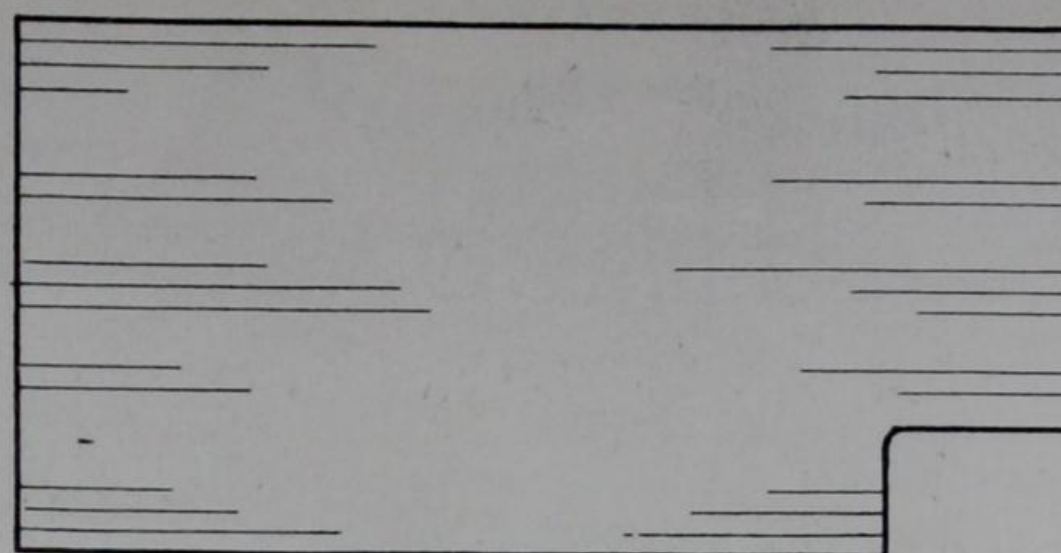
### IV. SPECIAL OPERATIONS

- (1) **PATTERN CUTTING:** Lights with shapes other than rectangles are considered pattern lights, which include shapes with circular sides, diagonal sides, etc. Pattern cutting on this glass is generally done with diamond saw or by masking and sandblasting. An extra charge is made for this work. Sketches clearly showing the required shape with dimensions should be submitted when a quotation on pattern cutting is desired. See Fig. 1.
- (2) **NOTCHING:** Simple corner notches can be supplied. These notches greatly increase the chances for breakage in transit and installation. We assume no responsibility for breakage. Prices for notching will be quoted to distributors upon receipt of sketch and specifications. See Fig. 2.
- (3) **HOLES:** Small holes, up to 1" diameter, for assembly use, etc., can be drilled by sandblasting or diamond drill; prices quoted out of the interior of the sheet are not practical.
- (4) **BENDING:** We do no bending, but this glass can be bent by companies having modern bending equipment. Full information should be obtained from the companies doing this work.





A PATTERN LIGHT  
FIG. 1



A CORNER NOTCH  
FIG. 2

## V. INSTALLATION

(1) **GENERAL SETTING PRACTICE:** Improved Structural Corrugated Glass should never be glazed directly on hard metal, masonry, or other unyielding base. Where a base of this kind is necessary, wood setting blocks or other cushioning material of adequate size and shape should be used. This glass should never be set directly in concrete, as breakage may result, and it should never be wedged tightly into an opening. Not less than  $\frac{1}{8}$ " should be allowed at each side jamb. The factory does not supply molding, trim or fittings.

### (2) INTERIOR SETTING PRACTICE:

(a) **BUTT JOINTS:** Where this glass is set edge to edge, the sides of the abutting lights must be accurately ground. The appearance of the installation will be improved if the ground edges are first painted with a clear cellulose acetate lacquer or transparent cellulose tape is applied; this will serve to remove the white, ground-glass edge, when the installation is viewed from an oblique angle, and will prevent touching and spalling.

(b) **DIVISION BARS:** This glass can be set with division bars of metal, wood or plastic, which may either be specially designed for the purpose or made up of stock shapes. Unless the division bars provide coverage of at least  $\frac{1}{2}$ " from the edge of each light, the edges of the glass should be ground.

(c) **MOLDINGS:** Head and sill moldings are generally used to hold the glass in place. Unless used in connection with ground edges, moldings should be at least 1" deep, to cover any spalls or chips. Moldings may be of wood or metal, and may be made to fit the contour of the glass or may be straight, with the contour filled by scribed wood fillers, gypsum casting plaster, putty or glazing compound. Wood moldings should be primed before setting, and the material used to fill the contours should be colored to match the finish trim.

(d) **SETTING WITHOUT MOLDING:** This glass is sometimes set with pegs or blocks shaped to fit one or more corrugations. Installations of this type require ground edges. Care must be used to fit the pegs to insure a firm setting; it is often necessary to adjust the opening to fit the glass by the use of fillets or furring.

### (3) EXTERIOR SETTING PRACTICE.

(a) **BUTT JOINTS:** All butt joints, including mitered joints, in exterior installations should be made waterproof by using a filler such as show case cement.

(b) **DIVISION BARS:** Weatherproof tape should be used between the division bars and the glass, both inside and outside.

(c) **MOLDINGS:** The glass should be bedded in glazing or caulking compound, colored to match the molding, at head, sill and side jambs. Plaster filling should not be used for exterior installations.

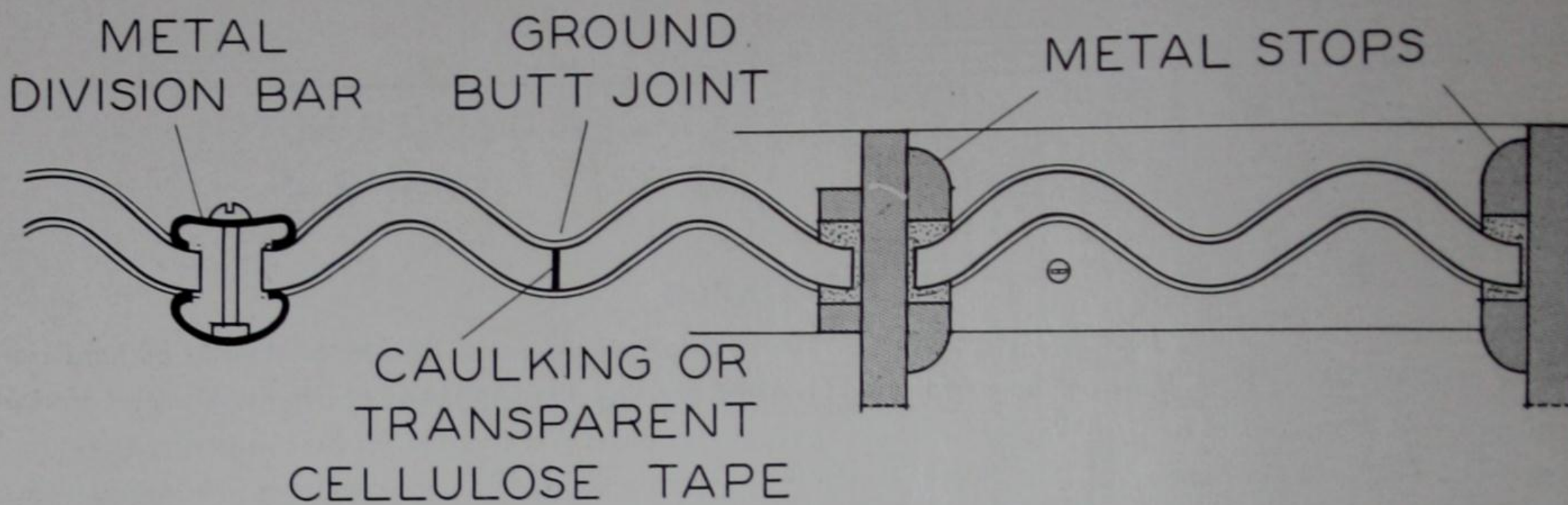
## VI. DESIGN

Wherever possible, sketches showing installation details should be sent to us by distributors. Where a long run of butt-joined edges is involved, we can obtain more accurate results if we know also the size of the opening to be filled. We are anxious to assist in any way possible to solve any problems that may arise in connection with the use of Improved Structural Corrugated glass.

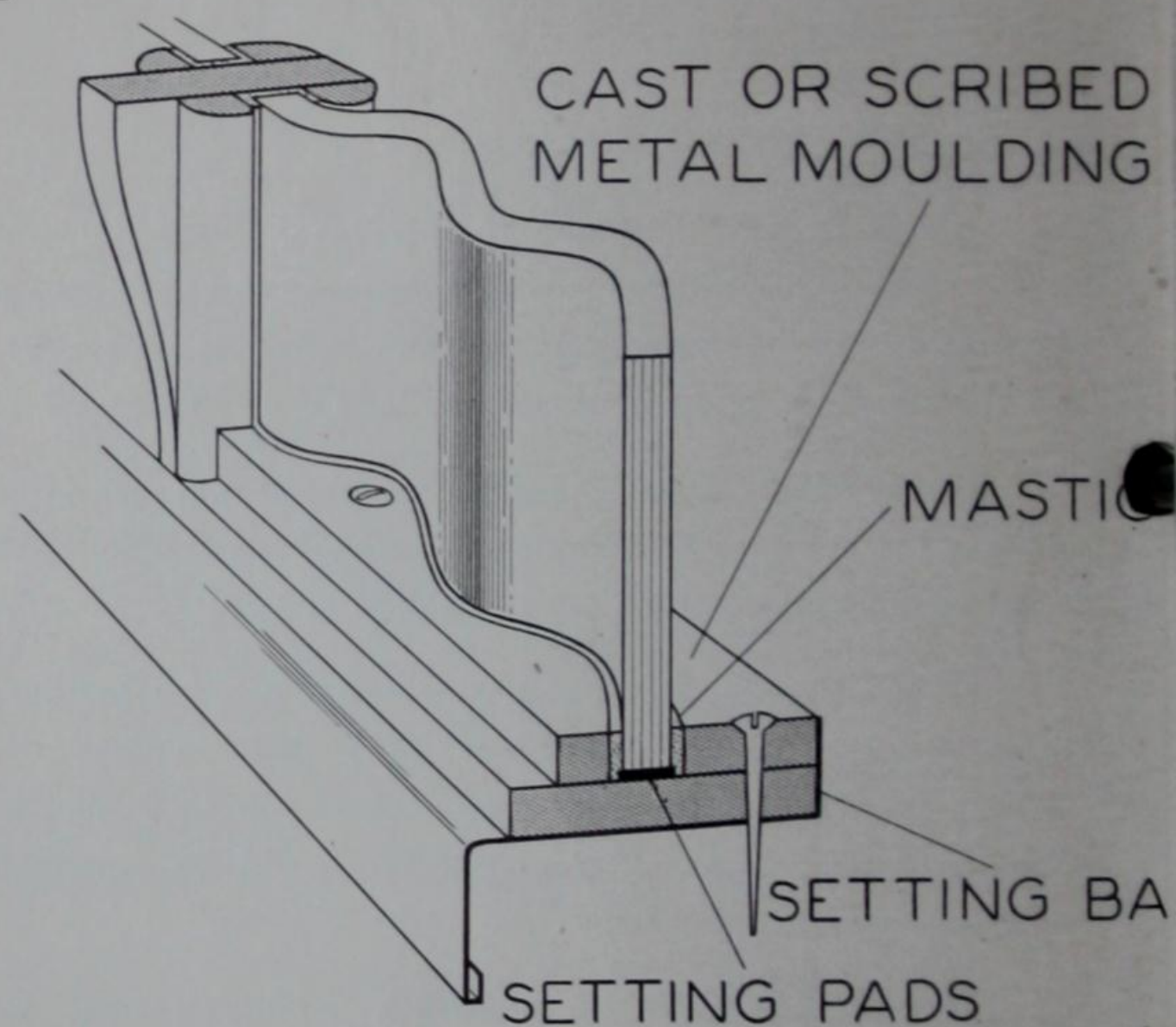
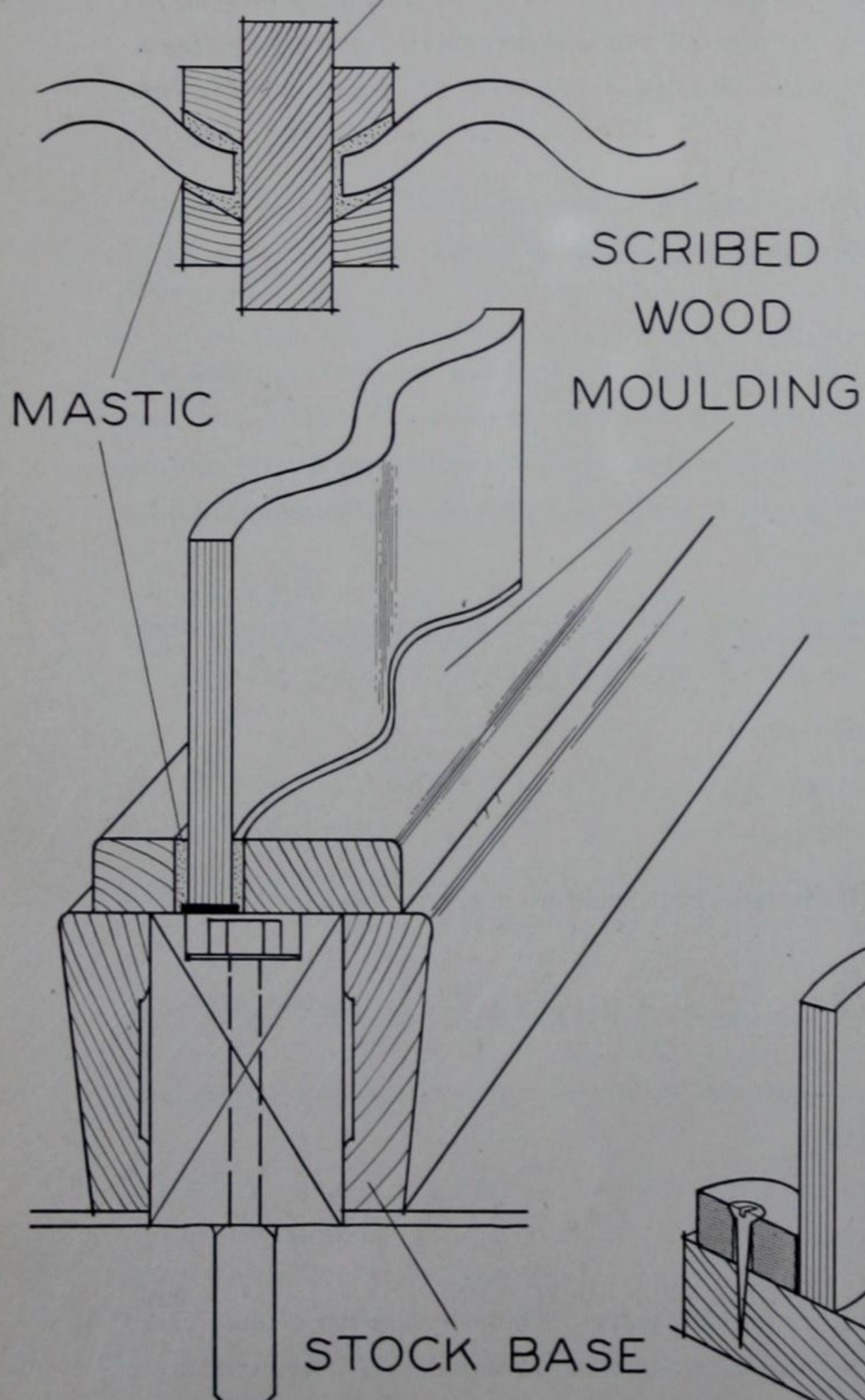


# STRUCTURAL CORRUGATED GLASS

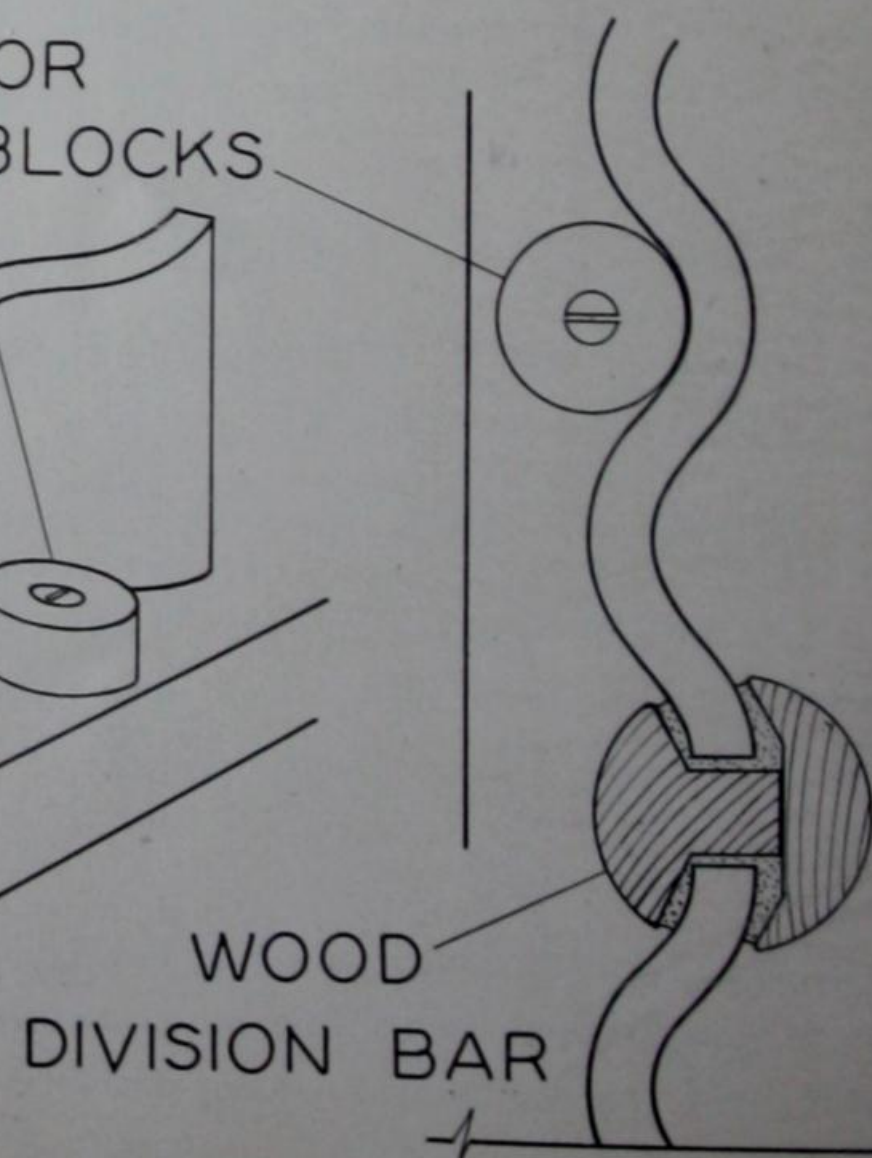
## SUGGESTED INSTALLATION DETAILS FOR STRUCTURAL CORRUGATED GLASS



WOOD DIVISION BAR



METAL OR WOOD BLOCKS

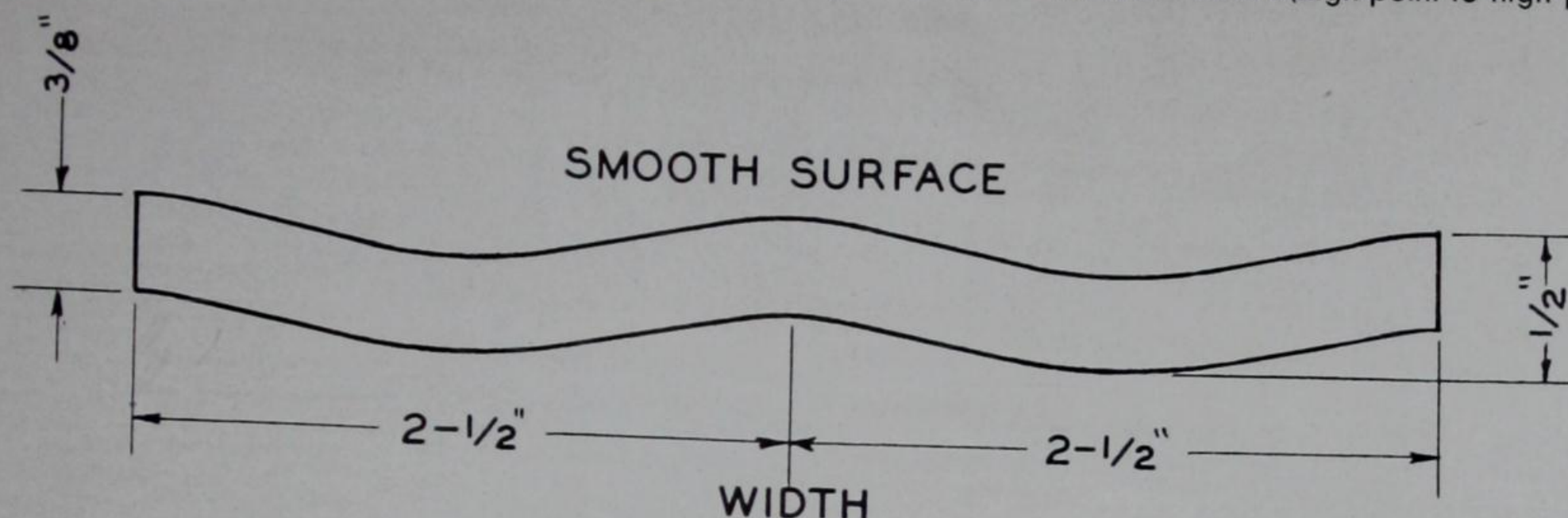




## STRUCTURALITE GLASS

### I. GENERAL CONSIDERATIONS

(1) SPECIFICATIONS: Maximum width: 50" — Maximum length: 144" — Thickness of glass: approx.  $\frac{3}{8}$ " — Overall Depth, approx.  $\frac{1}{2}$ " — Approx. Weight, lbs. per sq. ft.: unpacked 5.3 — packed 6.7 — Pitch of Pattern (high point to high point)  $2\frac{1}{2}$ ":



(2) PRACTICES TO BE OBSERVED IN ORDERING: Same as for Improved Structural Corrugated Glass, see Page 19. Structuralite Glass can be cut to any given width dimension, subject to our usual tolerances, without the necessity of grinding an edge to achieve widths that are not multiples of  $2\frac{1}{2}$ " or  $1\frac{1}{4}$ ". However, when butt joints are required it must be remembered that butting edges must be cut at either the high point of the pattern or at the low point of the pattern, and that an edge cut at the high point will only butt join with another edge similarly cut at the high point and that an edge cut at the low point will only butt join with a low point edge.

(3) DIMENSIONAL TOLERANCES: Same as Improved Structural Corrugated Glass.

### II. EDGEWORK

CUT EDGES and GROUND EDGES: The conditions applying to Structuralite Glass are identical with those for Improved Structural Corrugated Glass and outlined on Page 19.

MITERED EDGES: Details and full information must be supplied.

### III. SURFACE TREATMENT

### IV. SPECIAL OPERATIONS

### V. INSTALLATION

### VI. DESIGN

In these regards the conditions applying to Structuralite Glass are identical with those described for Improved Structural Corrugated Glass. See Pages 19, 20 and 21.

We manufacture a complete line of figured sheet and wire glass. Please send for catalogs or consult Sweet's Architectural Catalog File for illustrations and descriptions. Samples furnished upon request.

## MISSISSIPPI GLASS COMPANY

200 Fifth Ave.  
New York, N. Y.

Main & Angelica Sts.  
St. Louis, Mo.

201 No. Wells St.  
Chicago, Ill.

Fullerton  
California

Insulating  
Glass

Storefronts

Art Glass

General Glass

Miscellaneous



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**MISSISSIPPI**  
**STRUCTURAL CORRUGATED**

**A PRODUCT OF MISSISSIPPI GLASS COMPANY**  
SOLD BY MOST LEADING DISTRIBUTORS OF QUALITY GLASS



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ols  
hospitals  
offices  
factories

on plus clear vision anywhere



A PRODUCT  
SOLD BY MOS





# TWIN DOW

*the insulating  
window*

for:  
homes  
schools  
hospitals  
offices  
factories

and – for insulation plus clear vision anywhere

Storefronts

Art Glass

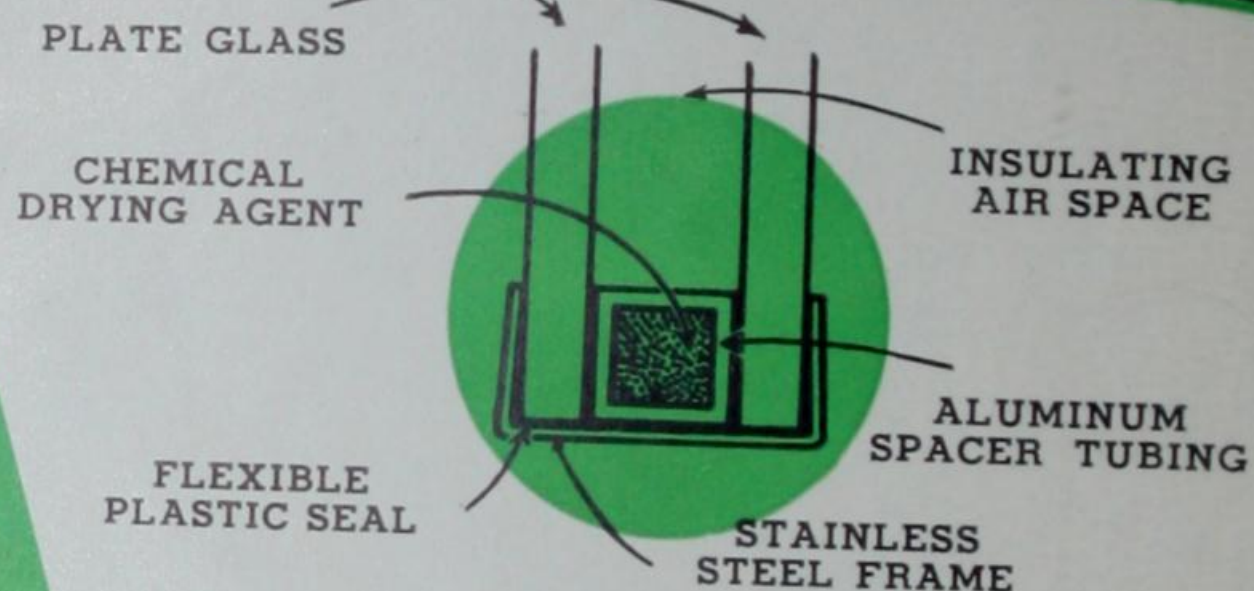
General Glass

Miscellaneous





The management of the General Brock Hotel wanted to capitalize on their exceptionally fine view of Niagara Falls—without the discomfort of cold windows, condensation, or high heating costs. They did it with TWINDOW—THE INSULATING WINDOW.



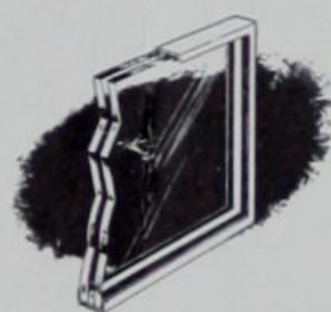
## WHAT TWINDOW IS:

Non-circulating air—one of the best insulators—is hermetically sealed between two or more pieces of glass. The entire edge of this glass-and-air sandwich is encased in a stainless steel frame, making a transparent insulating unit. A chemical drying agent initially removes all moisture from the air space and remains active permanently.

A material of exceptional plasticity provides a hermetic seal that ordinary shocks will not break. The stainless steel frame and flexible seal—exclusive with TWINDOW—means that TWINDOW'S Hermetic seal stays sealed.

**ONLY TWINDOW GIVES YOU THIS PROTECTION**





Every Twindow Unit is subjected to rigorous tests before shipment from the factory. Seldom, however, does a test show the value of Twindow as well as the photograph above. Ordinary plate glass display windows in a Winnipeg Furniture Store were being replaced with Twindow. Three Twindow Units were installed—one plate glass window remained. The temperature was 15° F. below zero.

## WHAT TWINDOW DOES

- Reduces heating costs.
- Virtually eliminates condensation.
- Minimizes cold downdrafts at windows.
- Decreases load on air conditioning equipment.
- Helps maintain desired temperature and humidity levels.

## TWINDOW DOES EVERYTHING A STORM WINDOW COULD DO . . . WITH THESE ADDED MERITS

- Requires cleaning on only two surfaces.
- Permits the use of large clear-span windows.
- Installs as simply as a single pane of glass.
- Eliminates the fuss and bother of storm windows.

**TWINDOW IS THE PERMANENT INSULATING WINDOW**

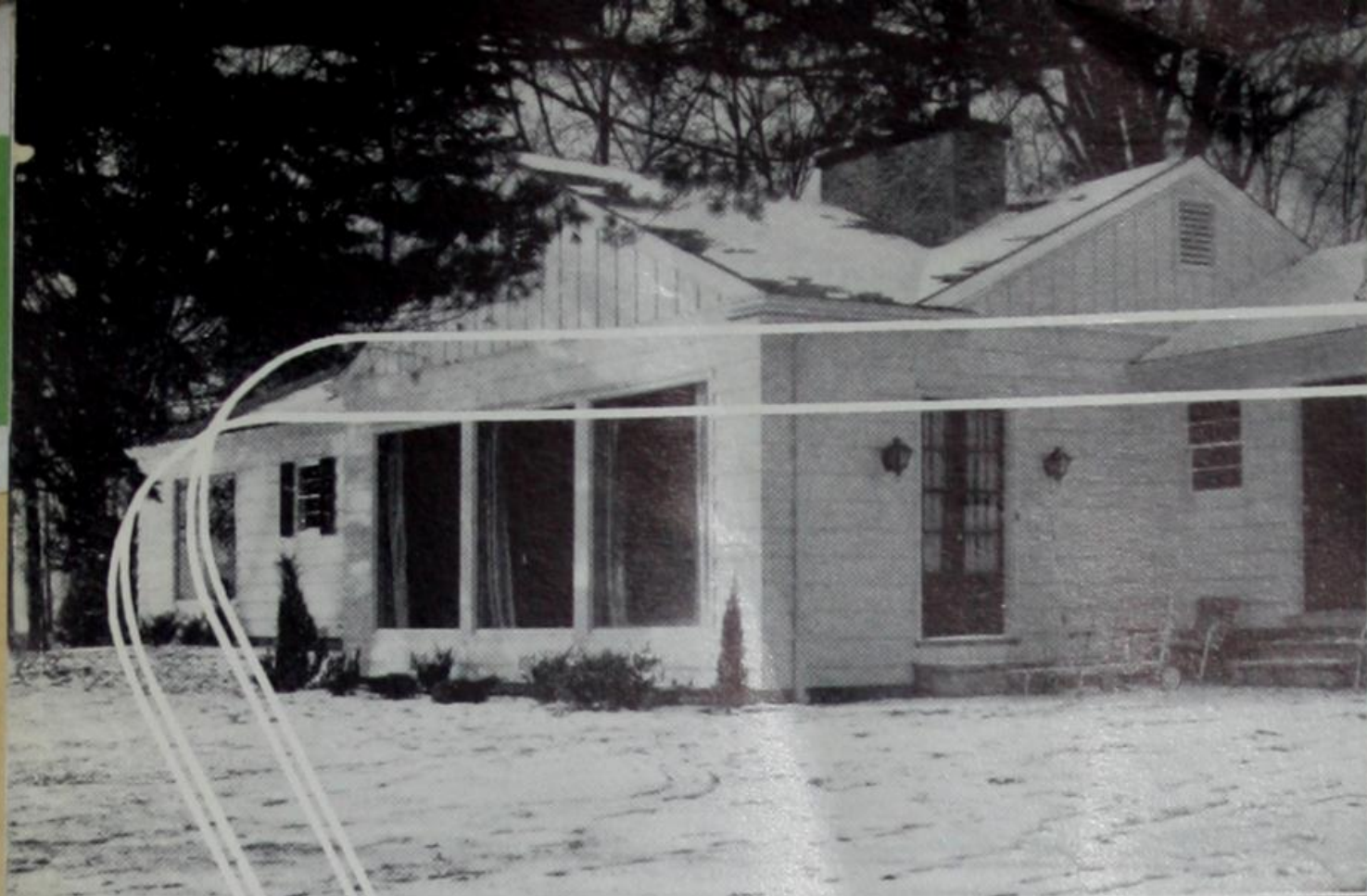
Storefronts

Art Glass

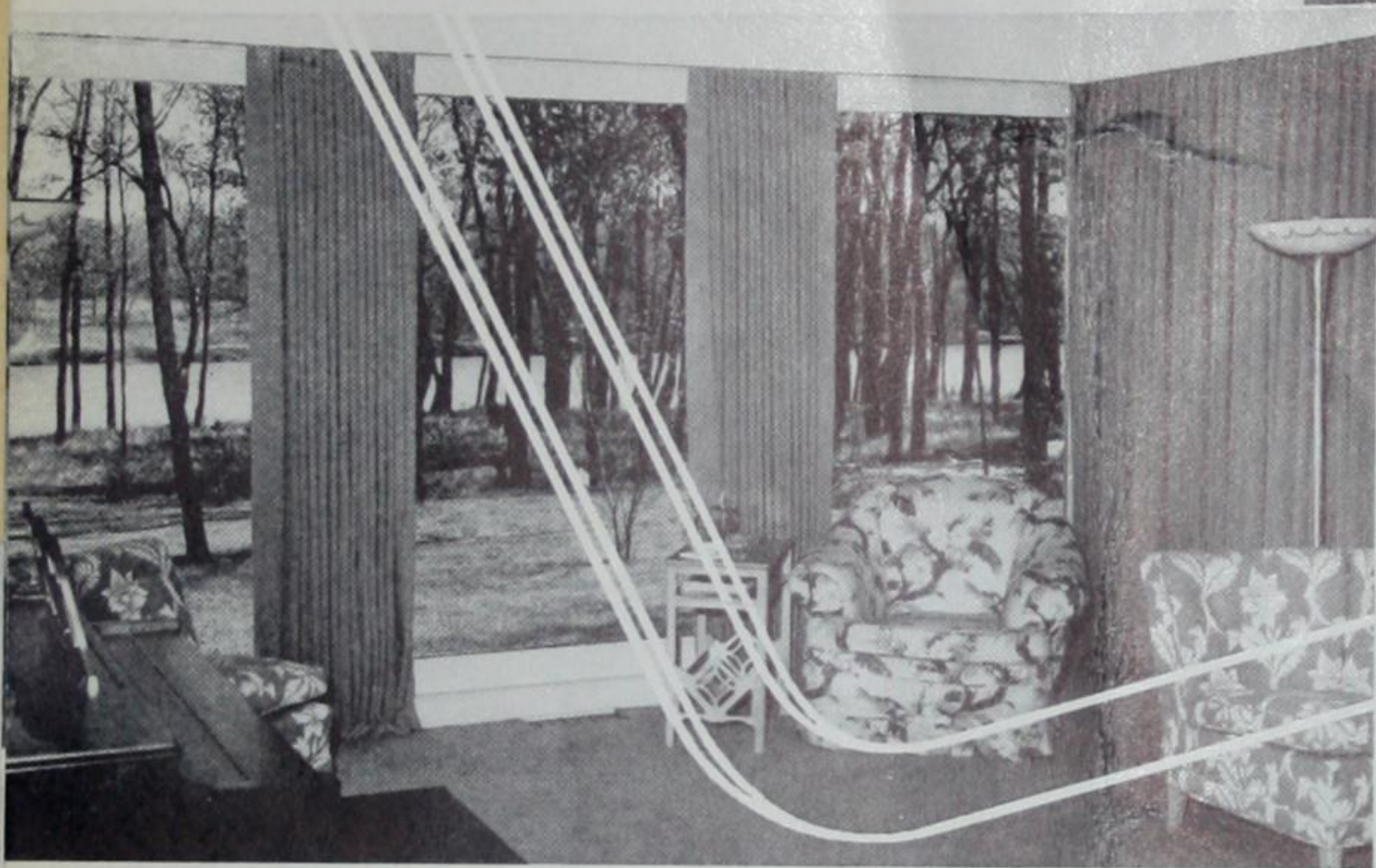
General Glass  
Catalogues

Miscellaneous





There's extra light and beauty from the Twindow picture window in this fashionable Oakville home. In addition to frost-free vision, and the comfort and economy of Twindow's highly efficient insulating qualities. Groothand & Cooper, Contractors.



All the colour, light and beauty of the outdoors was brought inside this beautiful Winnipeg home when large areas of Twindow were installed. Even in winter, vision is perfect through frost-free Twindow, and condensation damage to sills and walls is eliminated.



Large picture windows made from Twindow not only add light and beauty to this Saskatoon home, but improve heat and temperature control, too, because Twindow is the window with built-in insulation.

Modernization of the Moose Jaw home at right was helped out by using large areas of Twindow to add extra light and spaciousness and to make all interior floor space useable by eliminating window drafts.



**TWINDOW**  
*the insulating  
window*

**TWINDOW**

*for insulation plus*





**HOBBS GLASS LIMITED**  
GENERAL OFFICE, QUEEN'S QUAY AT SPADINA ST., TORONTO 2 B. ONT. PHONE ADELAIDE 2292

*Nov. 1951*

## FOR YOUR SPECIFICATION LIBRARY

Please destroy any previous information on "Twindow" you have in your files or in Hobbs Architectural Binder called "Glass in Architecture". In place of the old literature please add the enclosed new Twindow folder.

You will note that the back cover of the new folder carries new installation information. The details shown are suggested only, but are the result of considerable study on our part to discover the most practical and satisfactory way of glazing Twindow. Most critical dimensions in these details are the sizes of the rabbet.

Across the bottom of the second last page are shown Standard Sizes carried in stock at most of our branches across the Dominion. To assure good service to their clients many architects are showing these standard sizes right on the drawings.

Yours very truly,

HOBBS GLASS LIMITED

*Walter Packman*

W. R. Packman, Manager  
Architectural Sales Department.

WRP-fw.

EXCLUSIVE

**PITTSBURGH PAINTS**

DISTRIBUTORS

Storefronts

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Catalogues

Miscellaneous



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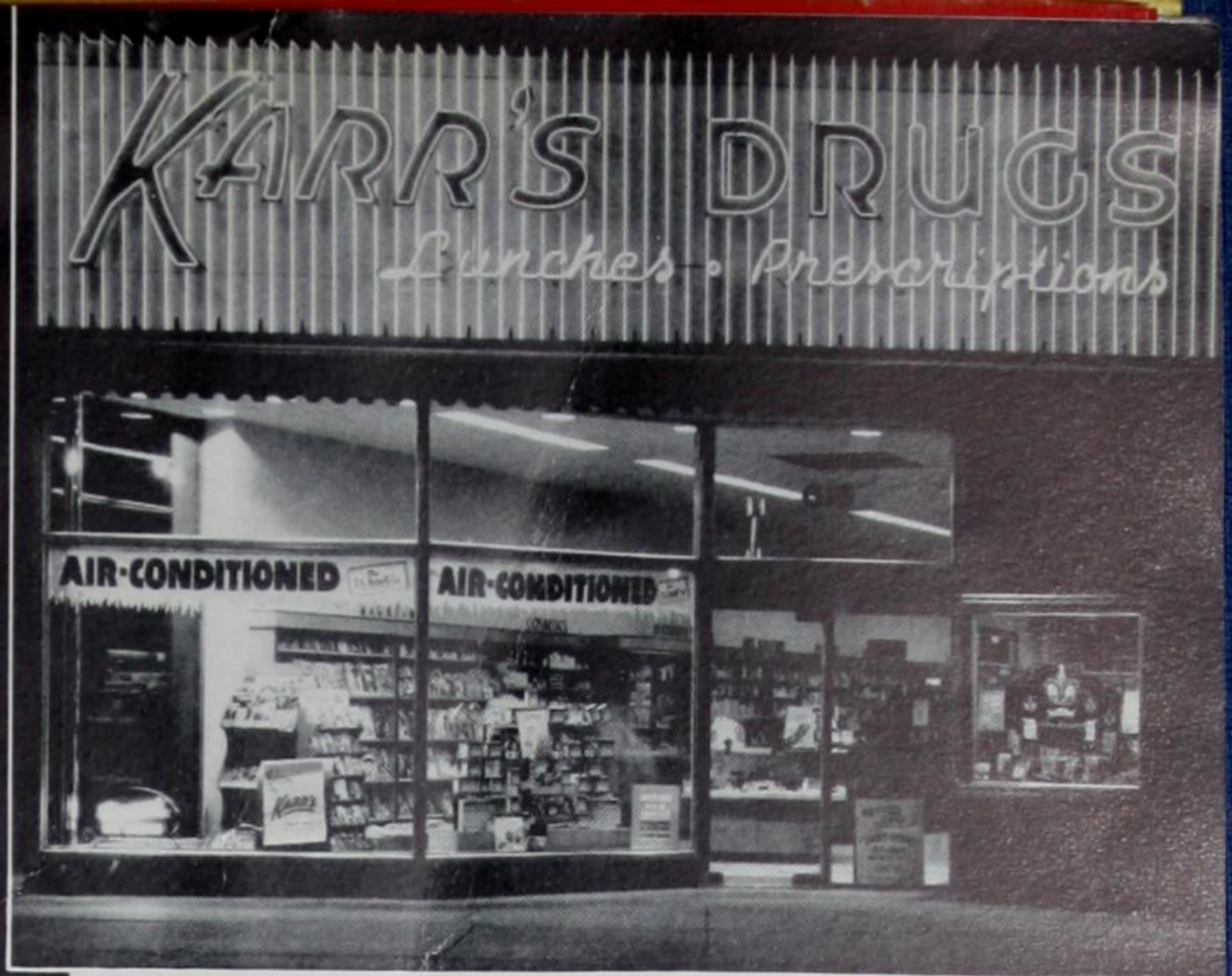
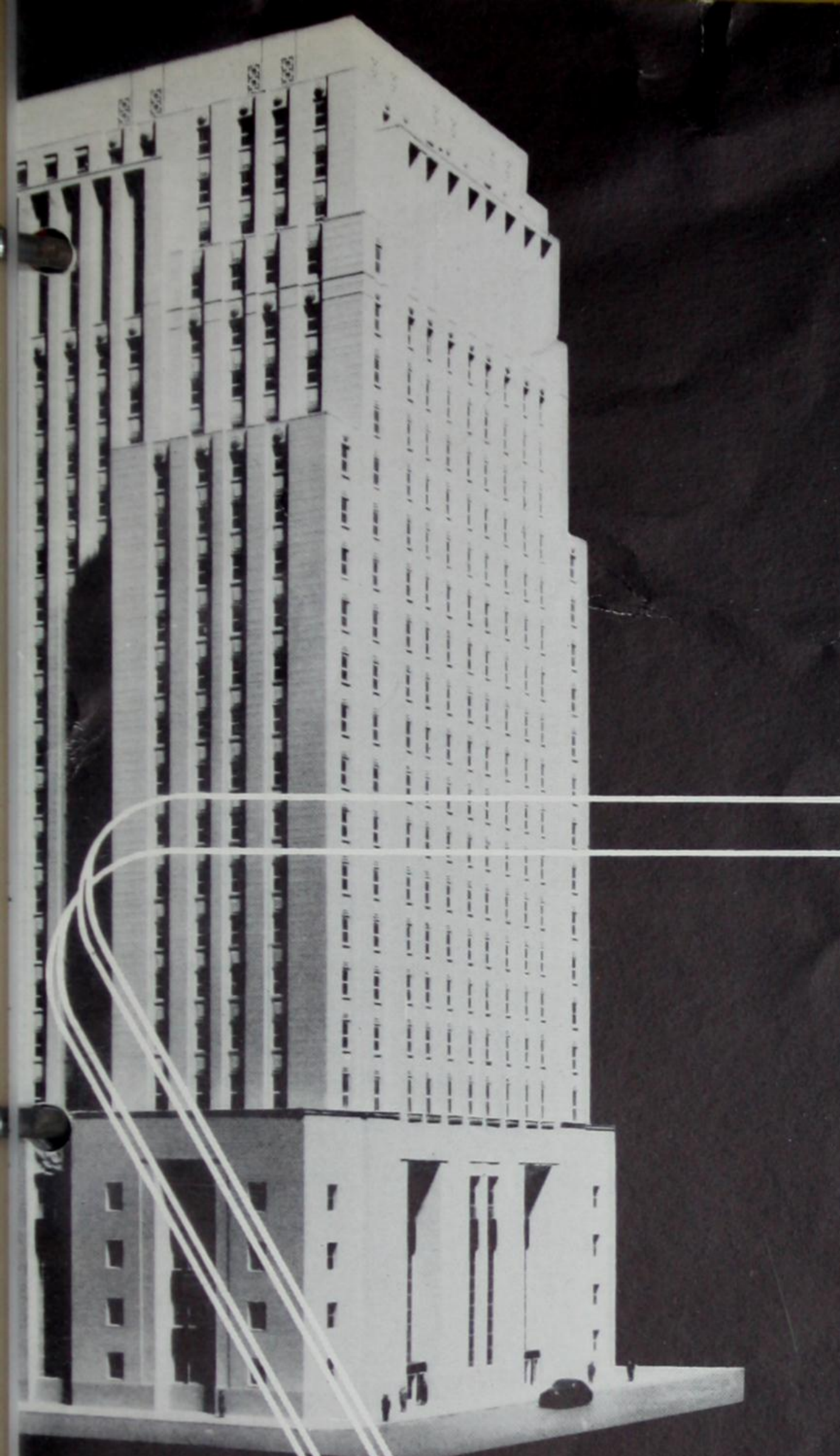
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ARCHITECTURE /  
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Lower air-conditioning costs in summer, reduced heating costs in winter and virtual elimination of dust infiltration and condensation damage are the reasons why this Winnipeg Drug Store installed Twindow.

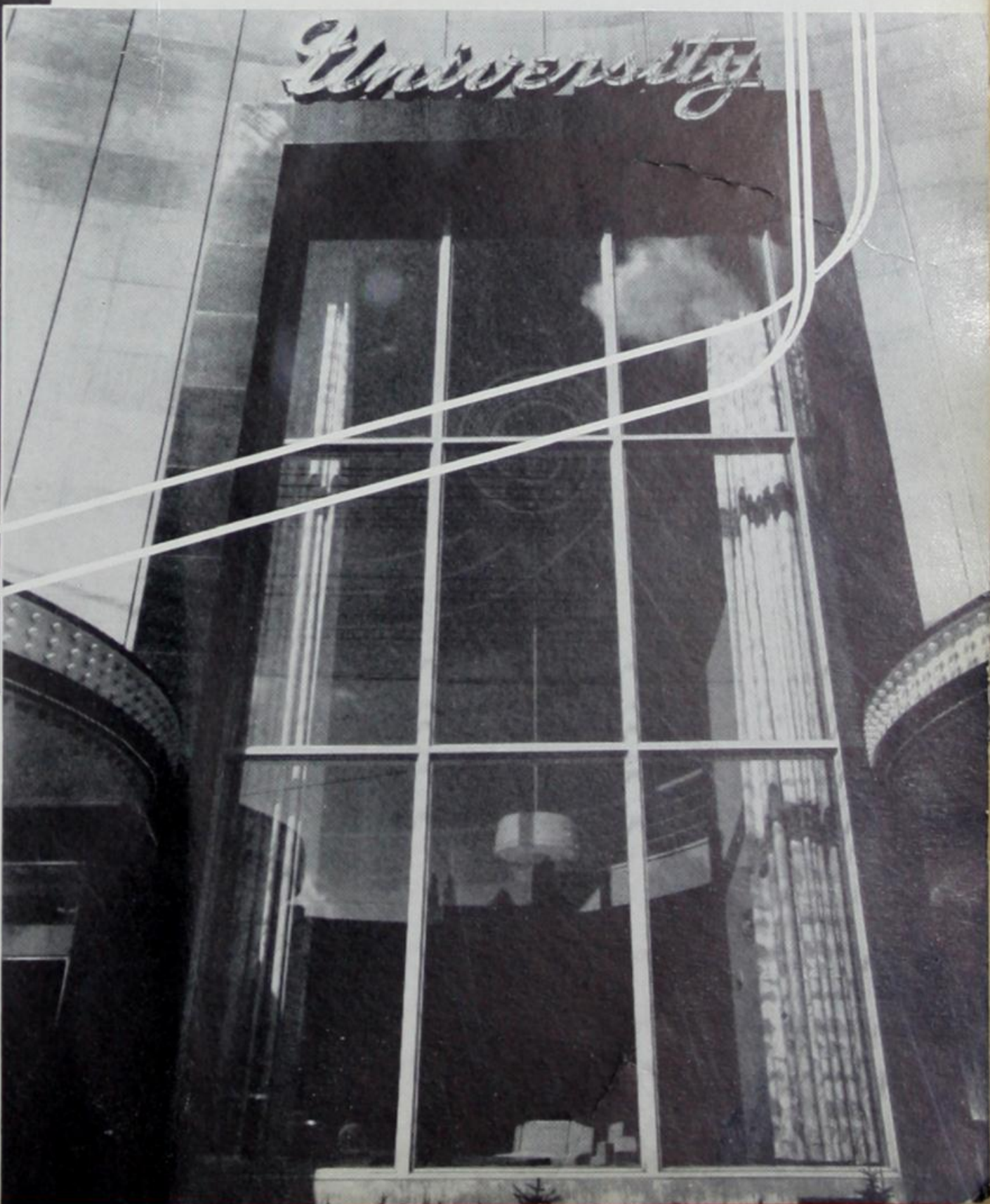


Because "you have to show them to sell them" this store in Saskatoon used Twindow display windows—the window that assures undistorted frost-free vision even in coldest weather.



Twindow was specified for exclusive use in the first four floors of the new Bank of Nova Scotia Building in Toronto for maximum temperature and humidity control, and to assure maximum use of all floor space, in comfort. Mathers and Haldenby, architects. J. L. E. Price, Limited, contractor.

This striking window made with Twindow in the University Theatre, Toronto, floods the lobby with light, stays frost and condensation free, and assists temperature and humidity control. Eric W. Hounsom, architect; A. G. Facey, assoc. architect. Contractor, Dickie Construction.



Storefronts

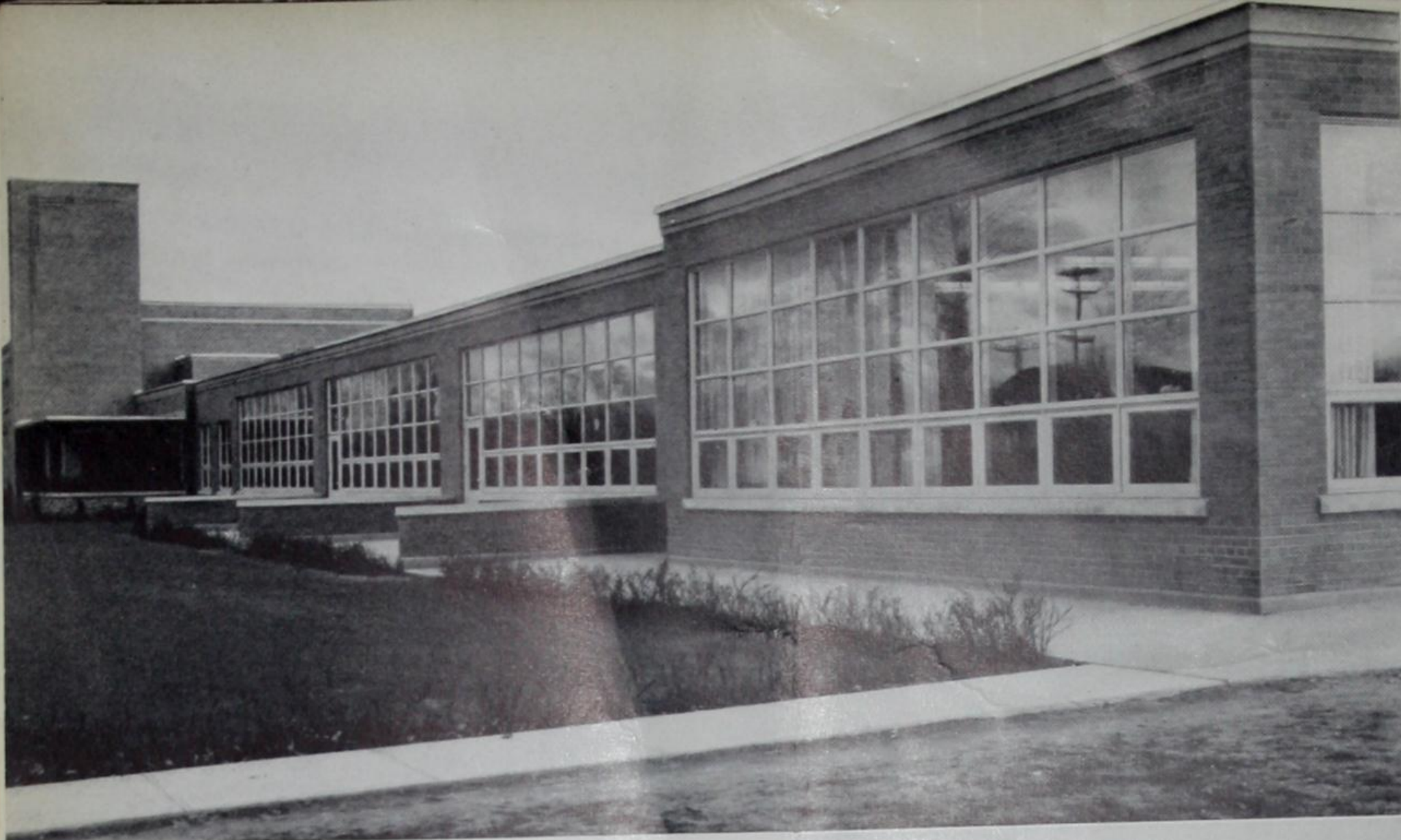
Art Glass

General Glass  
Catalogues

Miscellaneous

clear vision anywhere

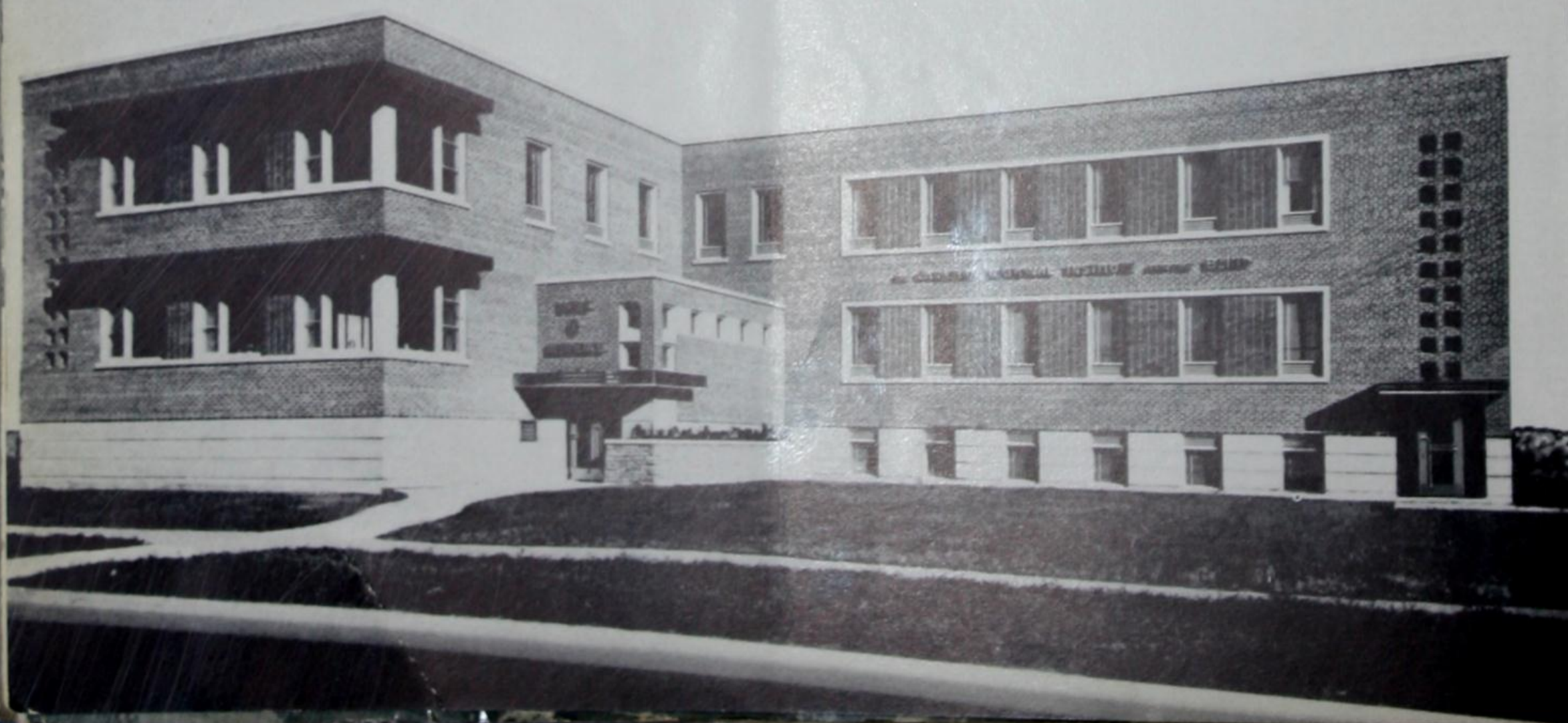
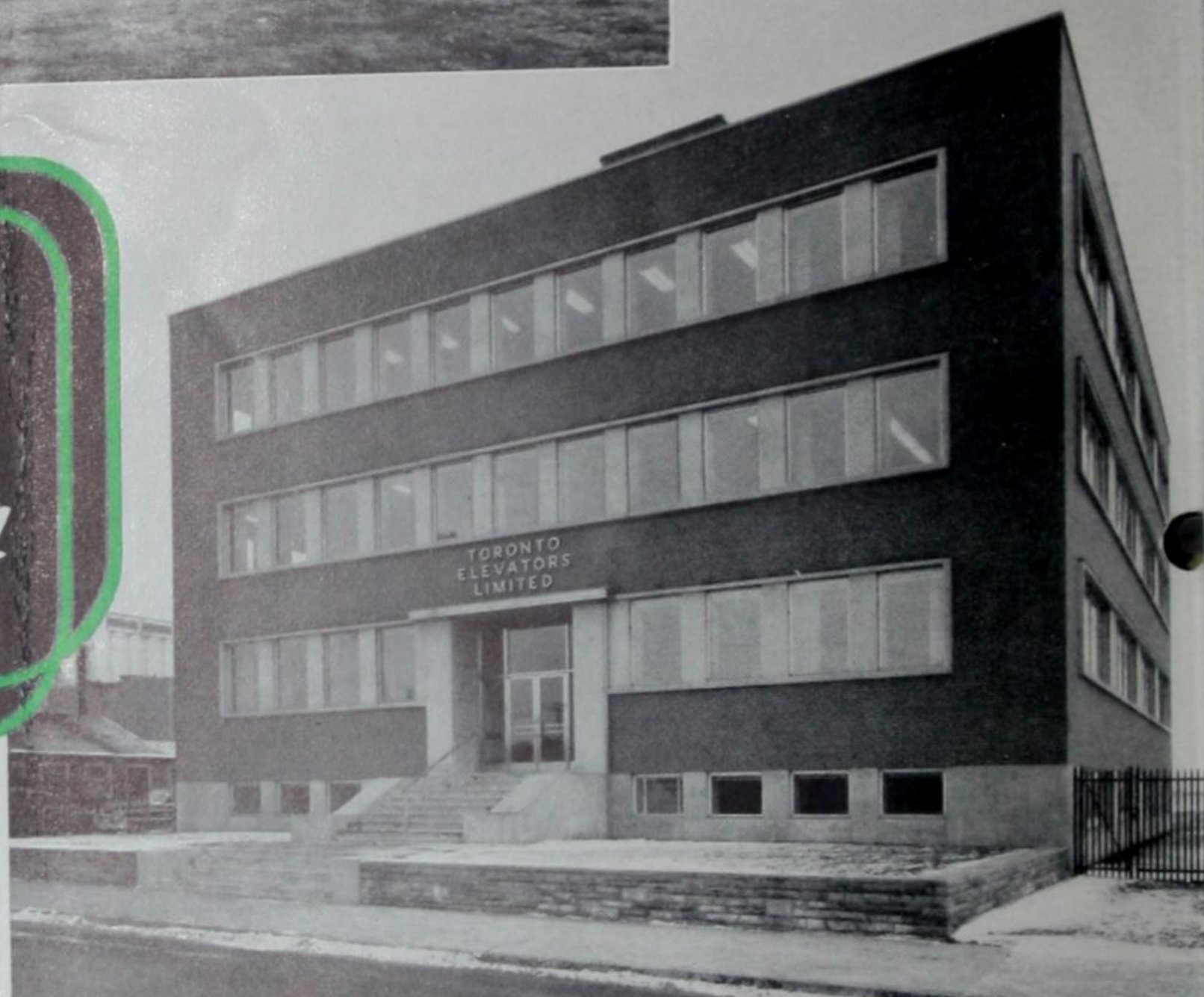




In the Princess Elizabeth School students enjoy more health and comfort, thanks to large areas of Twindow, the insulating window, which gives plentiful natural light while reducing heating costs. Architect: R. D. Schoales.

# **TWINDOW** *the insulating window*

In the new Toronto Elevators Limited office building, architects Mollard & Whaley, Toronto, used Twindow, the insulating window, to add light . . . extend useable floor space right to windows . . . eliminate dirt infiltration and reduce heating and air-conditioning costs. Contractor, Carter Construction Co.



Useable floor space in this Canadian National Institute for the Blind extends right to the windows installed with Twindow, since Twindow eliminates both drafts and dirt and dust infiltration. There is no sash rot, condensation, heating and air-conditioning costs are lowered with Twindow, the insulating window. Architect, Lloyd Fink.



## TWINDOW GLASS COMBINATIONS

The glass used in the standard Twindow Unit is polished plate glass. For special purposes, however, Twindow Units can be readily made up of other types of glass or combinations of glass, of which the following are examples:

- \* For an appreciable reduction in the transmission of solar heat.  
—Solex Heat-absorbing Plate Glass together with regular Polished Plate Glass.
- \* For true colour definition with maximum clarity of vision.  
—Water White Plate Glass.
- \* For added protection and safety from impact.  
—laminated Safety Glass.
- \* For strength (four times that of plate glass) and resistance to impact and thermal shock.  
—Herculite Tempered Plate Glass.
- \* For translucency and light diffusion without transparency.  
—certain figured or sand-blasted glasses; the rough surface always inside towards the dirt free air space.

## MAXIMUM SIZES AND TYPES

- \* **Standard Twindow—up to 70 sq. ft.**  
Two lights of  $\frac{1}{4}$ " Polished Plate Glass with one half inch airspace. Channel width  $1\frac{1}{8}$ ". Height  $\frac{3}{8}$ ".
- \* **Triple Twindow—up to 35 sq. ft.**  
Three lights of  $\frac{1}{4}$ " Polished Plate Glass with two one quarter inch air spaces. Channel width  $1\frac{5}{8}$ ". Height  $\frac{3}{8}$ ".
- \* **Junior Twindow—up to 10 sq. ft.**  
Two lights of  $\frac{1}{8}$ " Polished Plate Glass or two lights of Double Strength "A" quality sheet glass. Channel width  $\frac{9}{16}$ ". Height  $\frac{3}{8}$ ".

Other combinations are possible where special problems are involved. Ask your Hobbs Representative for information.

## HOW TO SPECIFY

Wherever shown on drawings and details, multiple-glazed insulating units shall be Twindows as supplied by Hobbs Glass Limited. Each Twindow unit shall be identified by the manufacturer's label which shall remain on the unit for the Architect's inspection.

## DELIVERY

So that you can receive faster delivery on your Twindow, we suggest you design to use these Standard Sizes.

## THE INSULATING VALUE OF TWINDOW COMPARED TO SINGLE GLASS

Inside Room Temp.	Outside Temp.	Inside Surface Temperature of Glass	
		Single $\frac{1}{4}$ " Plate Glass	Twindow—Two pieces $\frac{1}{4}$ " glass with $\frac{1}{2}$ " airspace
70°F	+10°F	32°	53°
70°F	0°F	26°	50°
70°F	-10°F	20°	48°
70°F	-20°F	13°	45°
70°F	-30°F	7°	42°

## FOR HEAT TRANSFER CALCULATIONS

"U" = Number BTU'S per hour per °F difference in temperature, inside and out, per square foot passing through unit.

	"U"
Two layers $\frac{1}{8}$ " glass $\frac{1}{4}$ " air space (Junior Twindow)	.62
Two layers $\frac{1}{4}$ " glass $\frac{1}{2}$ " air space (Stand. Twindow)	.53
Three layers $\frac{1}{8}$ " glass $\frac{1}{4}$ " air space	.42
Three layers $\frac{1}{4}$ " glass $\frac{1}{4}$ " air space (Trip. Twindow)	.39
<b>For Comparison Purposes</b>	
Single sheet $\frac{1}{8}$ " glass	1.14
Single sheet $\frac{1}{4}$ " glass	1.07

Footnote—"U" values in the above table are based on these conditions: 70° F inside temperature; 0° F outside temperature; 15 mph outside air movement and 0 to  $\frac{1}{4}$  mph. inside air movement (average).

## GUARANTEE

During a period of five years after date of manufacture, Twindow Insulating Units are guaranteed not to develop, under normal conditions, material obstruction of vision as a result of dust or film formation on the inner glass surfaces. Any Unit failing to comply with the terms of this guarantee will be replaced f.o.b. the nearest shipping point to place of installation. This represents our maximum liability. This guarantee is effective only if installation is made in accordance with our specific instructions and does not apply to Units damaged by poor handling or improper installation.

## STANDARD SIZES --- FOR FAST DELIVERY

2 lts.  $\frac{1}{4}$ " plate glass and  $\frac{1}{2}$ " air space

48 x 36	48 x 54	48 x 72	54 x 72	60 x 72
48 x 48	48 x 60	54 x 60	60 x 60	72 x 84

Storefronts

Art Glass

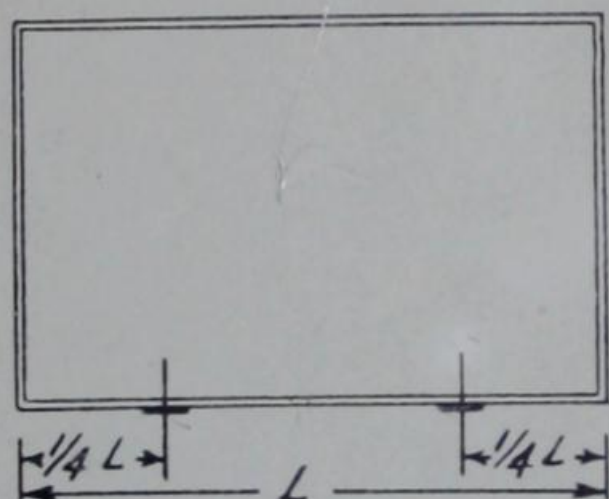
General Glass Catalogues

Miscellaneous

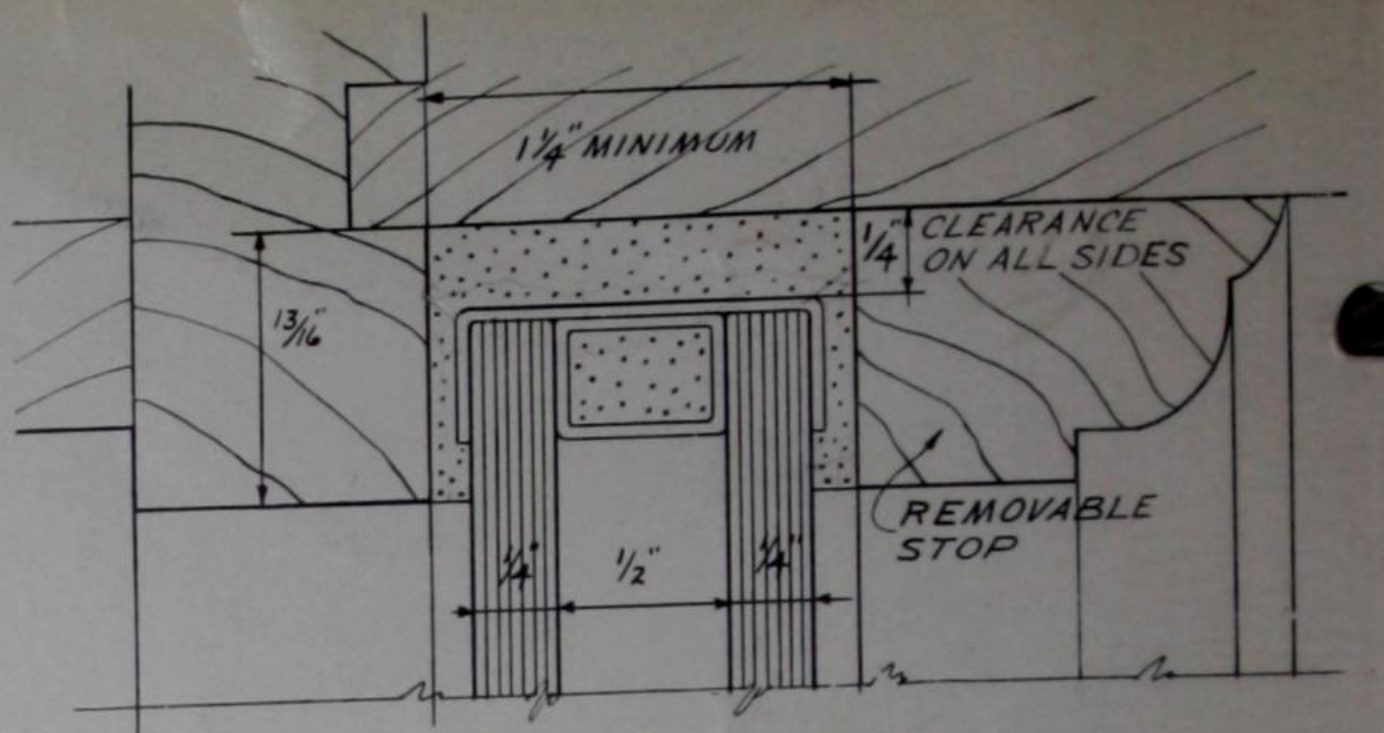


## HOW TO INSTALL TWINDOW

1. Use good grade of linseed oil base type putty or good glazing compound, free from corrosive materials.
2. Have putty soft when bedding in sash.
3. Press Twindow evenly into back bed of putty. Do not force it in as this may twist the unit.
4. Point up around all edges. Fill all voids before face puttying.
5. Light must be supported on hardwood setting blocks as per detail.



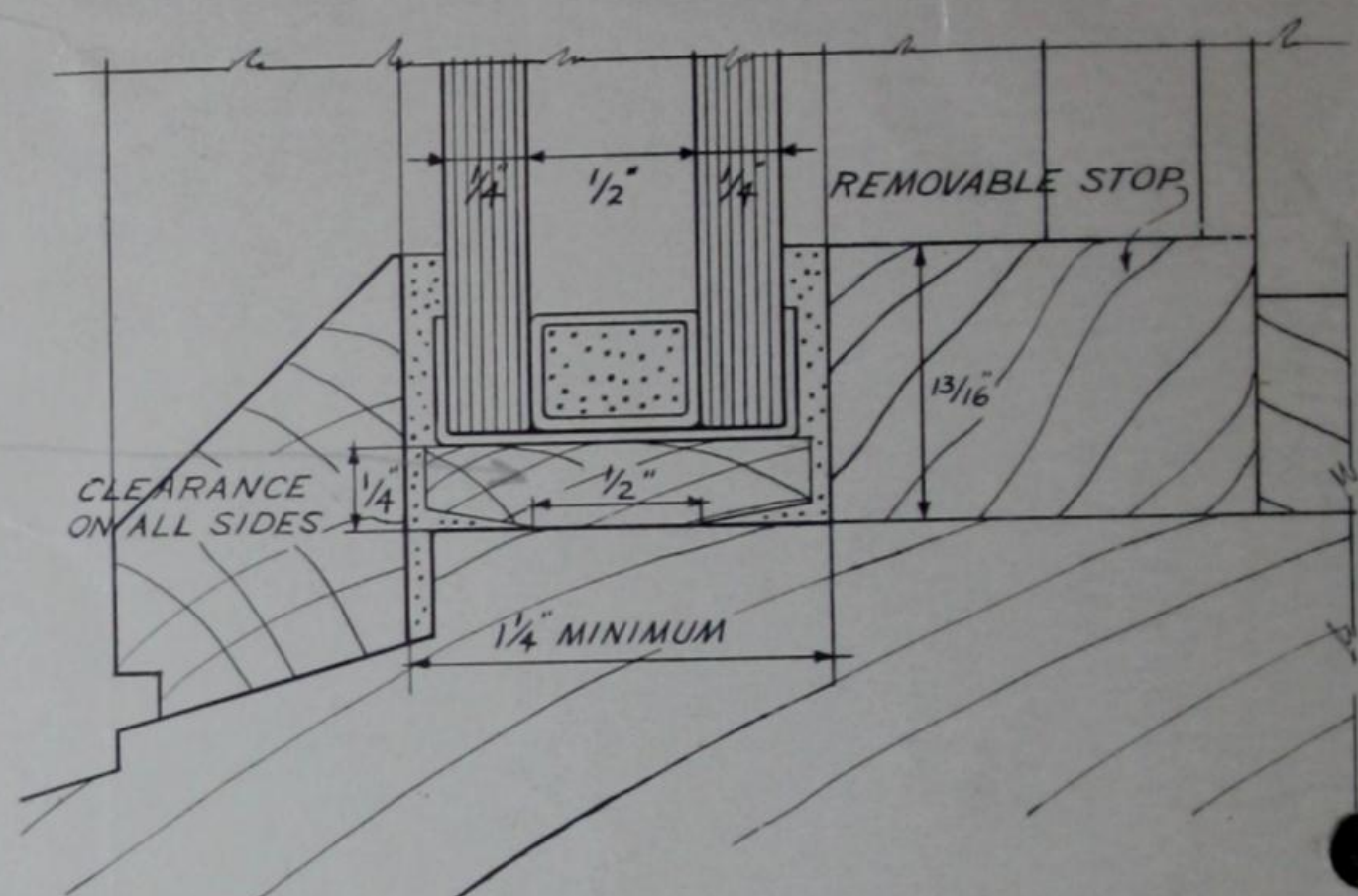
6. Setting blocks should be located in from each corner a distance of  $\frac{1}{4}$  the horizontal edge of the light. Setting blocks should be the following sizes: Twindow— $\frac{1}{4}$ " x  $1\frac{1}{8}$ " x 3". Twindow "Junior"— $\frac{1}{8}$ " x  $\frac{1}{2}$ " x 3".



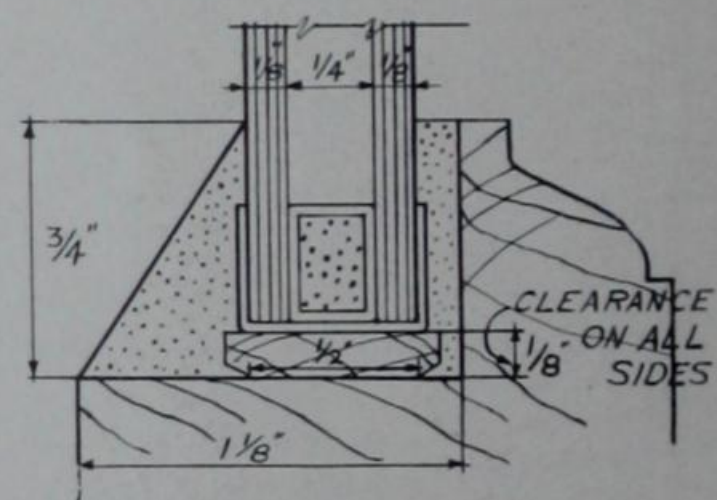
Outside

Typical Section Through Head and Sides.

Roomside



Typical Section Through Sill.



Twindow "Junior" in Wood Sash  
( $1\frac{3}{4}$ " Sash—Minimum)

**TWINDOW**

**HOBBS GLASS LIMITED**

BRANCHES NEWFOUNDLAND TO BRITISH COLUMBIA

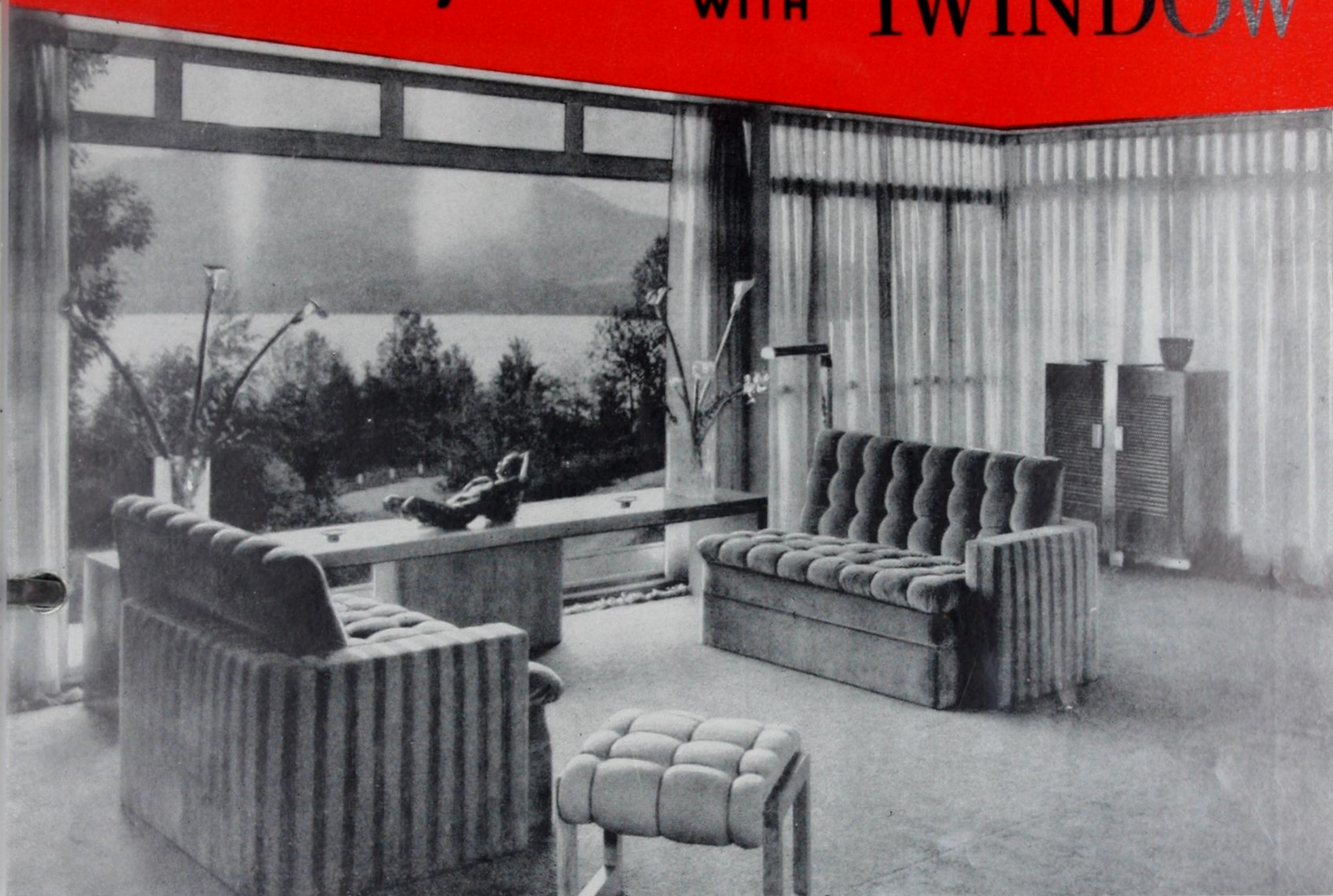




# Warm Comfort

*right up to the pane*

WITH **TWINDOW**



You can now have the big bright windows you want . . . and at the same time reduce the costs of heating and air-conditioning! Twindow is an *insulating unit* — a window consisting of two or more panes of glass with *hermetically sealed* air between.

With Twindow you can flood your rooms with daylight, yet have warmth right up to the pane—no “cold” area or downdraft! Picture windows of Twindow cheer and brighten your rooms—bring the outside right into your home.

## **TWINDOW MAKES HOUSEWORK EASIER**

Insulating units permit larger windows which in turn mean fewer corners to clean, less risk of breaking your fingernails or scratching your knuckles while

cleaning. Because your Twindow unit has a hermetically sealed air space between the two pieces of plate glass, the inner surfaces are permanently protected from dirt . . . never soil. Twindow has only two surfaces which require cleaning. Because of its insulating layer of dry air, Twindow virtually prevents condensation in winter. Not only does this give you clear windows but it minimizes damage caused by water dripping from windows, which deteriorates sills and floors, and stains fabrics, carpets and wall paper. Larger windows mean fewer crosspieces in your windows . . . requiring less cleaning and painting.

Twindow eliminates the drudgery of putting up and taking down storm sash as well as storing, repainting and reglazing them.

**YOUR ARCHITECT AND BUILDER KNOW ABOUT TWINDOW**

Storefronts

Art Glass

General Glass  
Catalogues

Miscellaneous



# TWINDOW and TWINDOW "Junior"

Twindow is made from two or more panes of plate glass with, usually, a  $\frac{1}{2}$  inch air space in between. Twindow may be obtained in any size up to 70 square feet. Twindow "Junior" is made from two layers of double strength window glass with a  $\frac{1}{4}$ " air space.

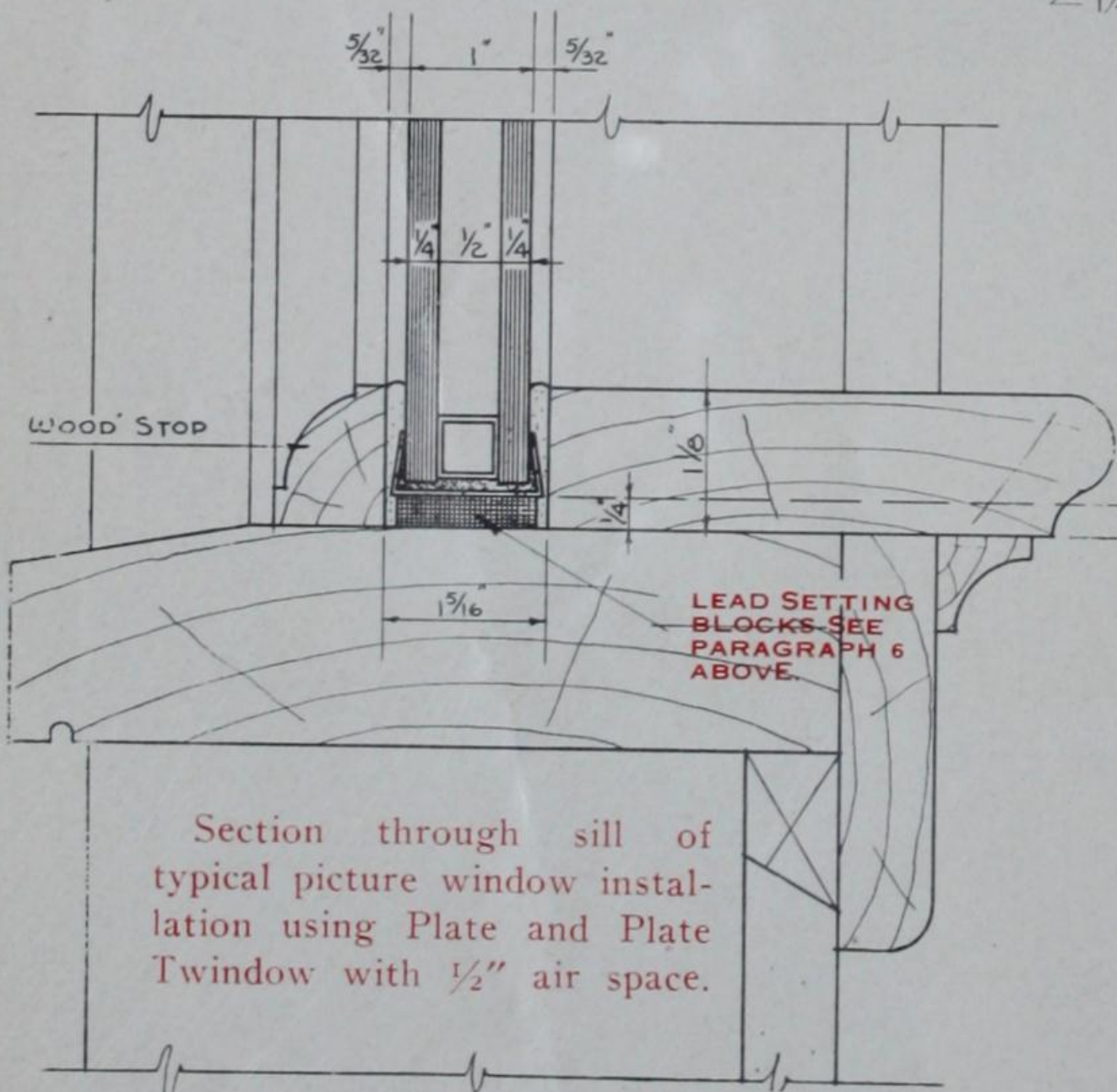
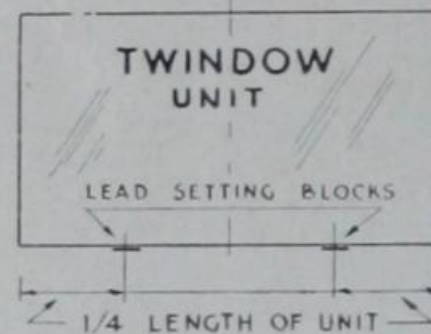
It is for smaller work and is made in sizes up to 1 square foot only. Twindow "Junior" lacks the clear vision beauty of plate glass Twindow. Twindow "Junior" is often glazed in wood sash as per the detail below. Your lumber mill is familiar with the necessary construction details and can advise you.

## HOW TO INSTALL TWINDOW

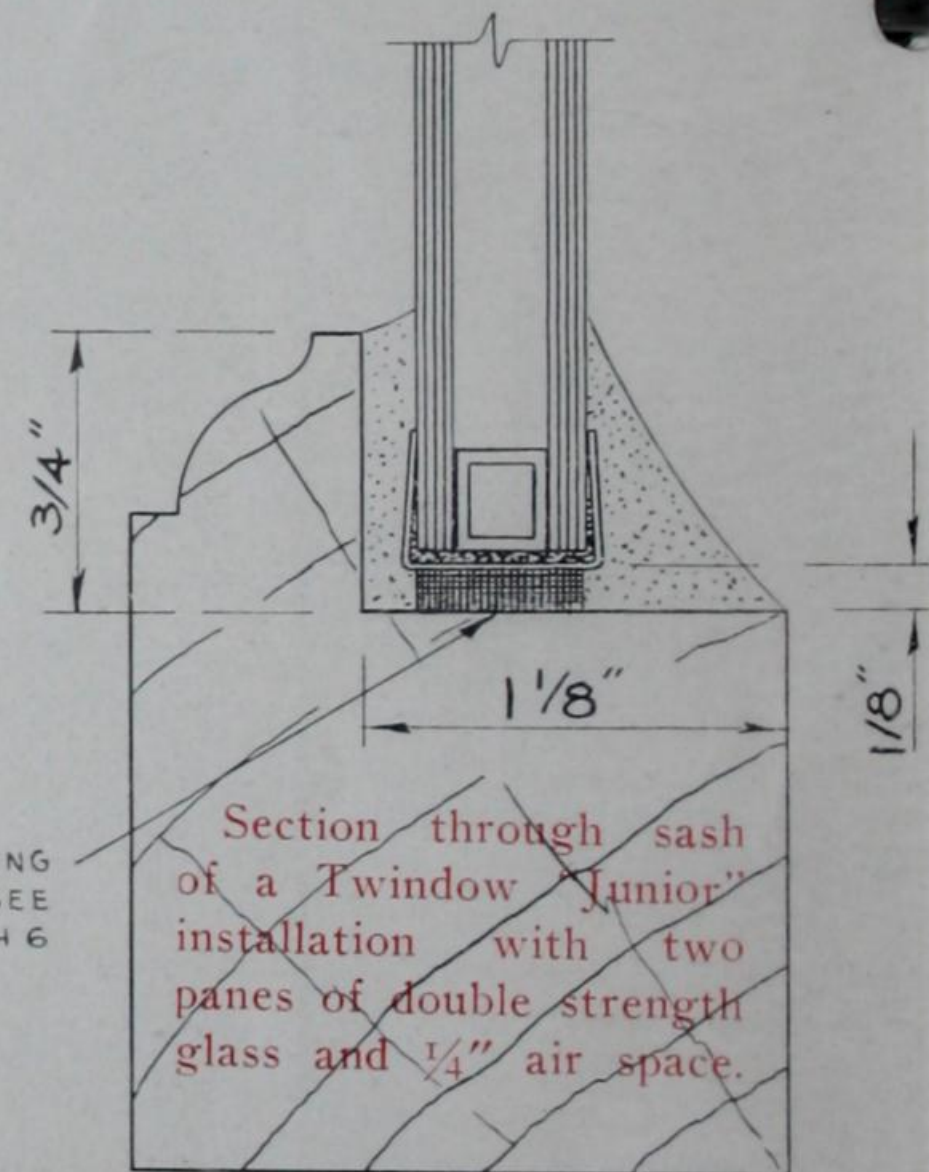
1. Use good grade of linseed oil base type putty or good glazing compound, free from corrosive materials.
2. Have putty soft when bedding in sash.
3. Press Twindow in evenly. Do not force it in so as to twist the unit.
4. Point up around all edges. Fill all voids before face puttying.
5. Lights over 96 united inches must be supported on soft lead setting blocks.
6. Setting blocks should be located in from each corner a distance of  $\frac{1}{4}$  the horizontal edge of the light. Lead setting blocks should be the following sizes: Twindow— $\frac{1}{4}$ " x  $1\frac{1}{8}$ " x 3". Twindow "Junior"  $\frac{1}{8}$ " x  $\frac{1}{2}$ " x 3".

### TWINDOW

NOTE: RABBET OF SIMILAR SIZE TO BE PROVIDED AT SIDE AND HEAD JAMBS

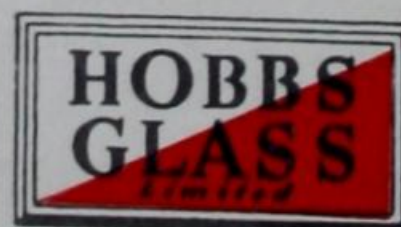


### TWINDOW "Junior"



MONCTON  
QUEBEC  
THREE RIVERS  
MONTREAL  
OTTAWA

PETERBORO  
OSHAWA  
TORONTO  
HAMILTON  
BRANTFORD



KITCHENER  
LONDON  
CHATHAM  
WINDSOR  
SUDBURY  
FT. WILLIAM

WINNIPEG  
REGINA  
MOOSE JAW  
SASKATOON  
VANCOUVER  
VICTORIA

LOOK TO GLASS FOR BETTER LIVING

P214-Tel-5-46



Hobbs Glass Announces  
STANDARD SIZES FOR

# TWINDOW

TRADEMARK

THE WINDOW WITH  
*Built-in*  
INSULATION



## What TWINDOW is:

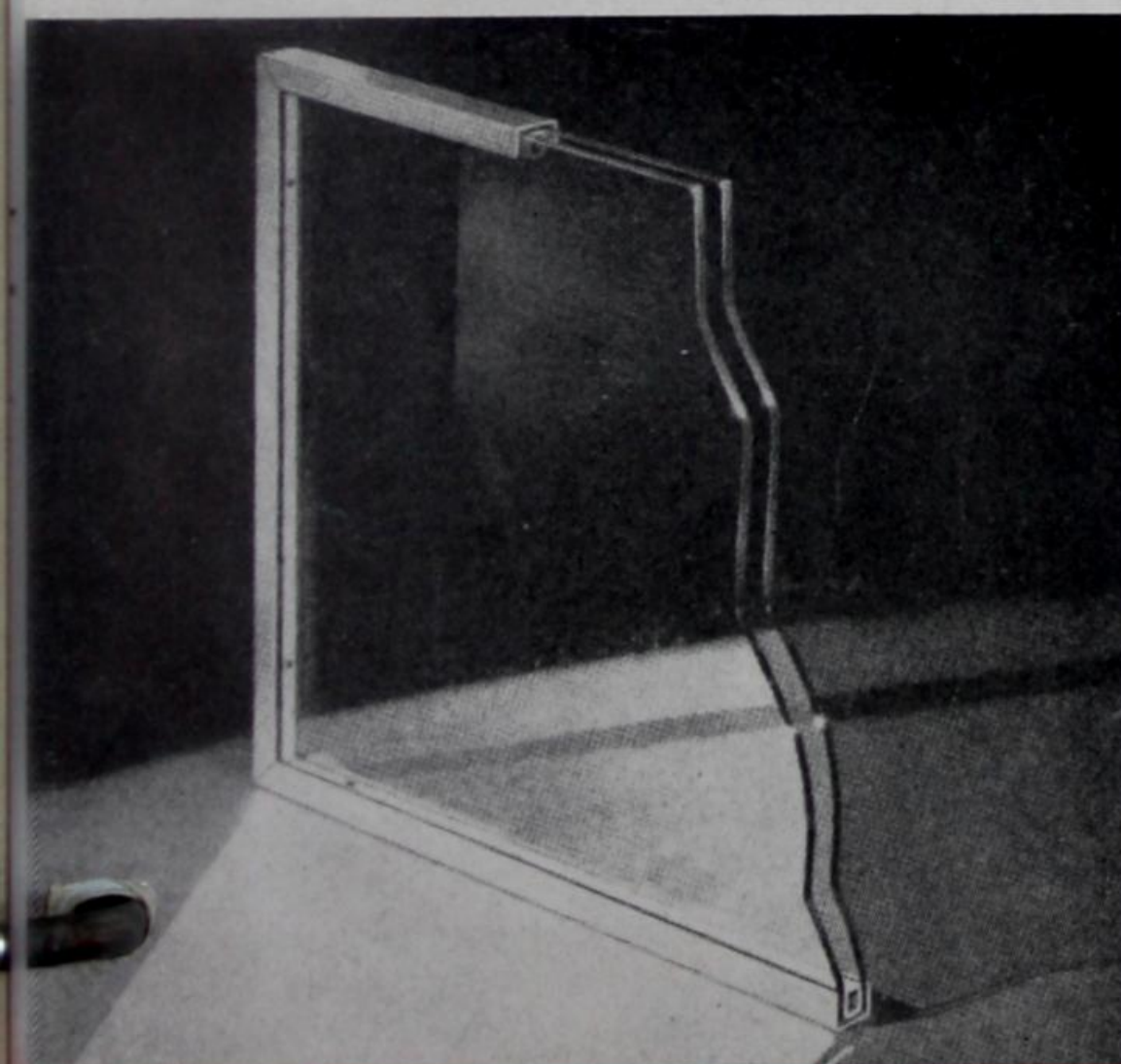
TWINDOW INSULATING UNITS are completely fabricated and consist of two or more pieces of glass enclosing a small hermetically sealed air space. Hollow aluminum tubing separates the pieces of glass. The entrapped air is at atmospheric pressure. It is dehydrated initially by means of a drying agent within the spacer tubing, which has access to the

air space through the holes adjacent to the internal corners. This desiccant provides added insurance against the slightest vapor diffusion.

The entire edge of each Twindow Insulating Unit is encased in a stainless steel channel. This channel protects the seal as well as the edges of the glass during handling and provides a firm and even edge for installing.

## What TWINDOW does:

- Reduces heating costs.
- Decreases load on air-conditioning equipment.
- Permits the use of larger windows.
- Virtually prevents condensation.
- Helps maintain desired temperature and humidity levels.
- Minimizes cold downdrafts at windows.
- Adds to comfort and health the year 'round.
- Installs as simply as a single pane of glass.
- Requires cleaning on only two surfaces.
- Combines ideally with PC Glass Block construction.



TWINDOW IS SOLD IN CANADA BY HOBBS

Storefronts

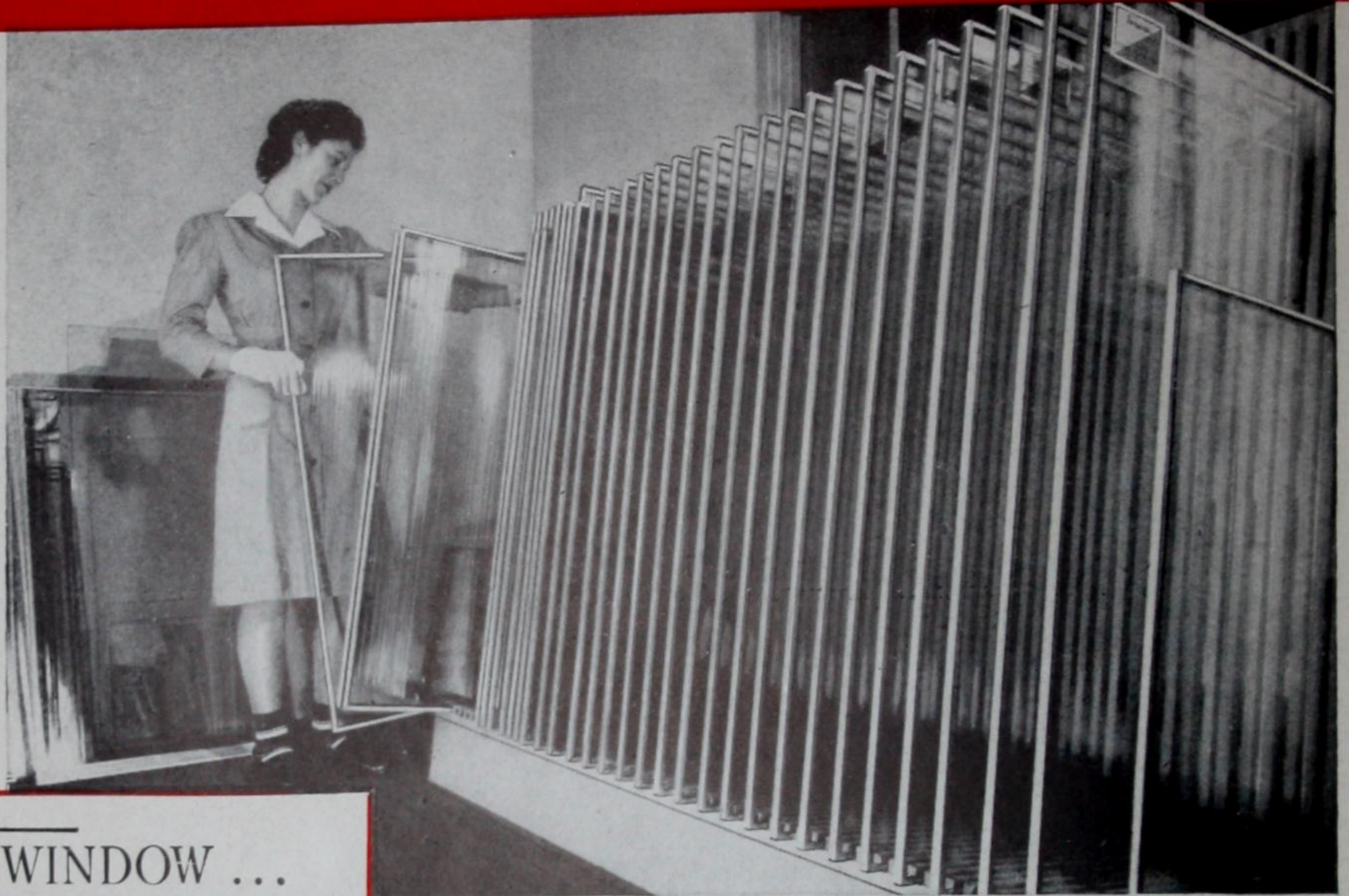
Art Glass

General Glass  
Catalogues

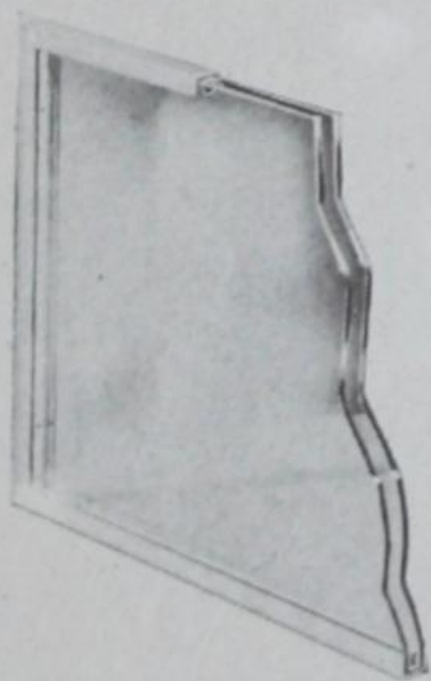
Miscellaneous



# TWINDOW STANDARD SIZES



TWINDOW ...



- Virtually prevents condensation
- Minimizes downdrafts near windows
- Installs as simply as a single pane of glass
- Requires cleaning on only two surfaces
- Reduces heating costs
- Permits use of larger windows

## SOME SIZES CAN BE DELIVERED IMMEDIATELY FROM STOCK!

In order to facilitate production and to meet increasing demands for Twindow, as well as to simplify design and installation, Hobbs have established a range of standard Twindow sizes.

The wide acceptance of Twindow is a tribute to its superior performance and its permanency as an insulating unit. Twindow is the *newest* in double glazing! Hazards such as chipping and faulty seal, that may affect other types of double glazing, are eliminated by the exclusive Twindow seal and stainless steel frame. Twindow's hermetic seal *stays* sealed! Only Twindow gives you this protection!

Remember, you may order Twindow in standard sizes **now**. Delivery is prompt. Twindow is made in Canada.



## ORDER THESE STANDARD SIZE



# They're here - **BIG WINDOWS** that keep rooms warmer!

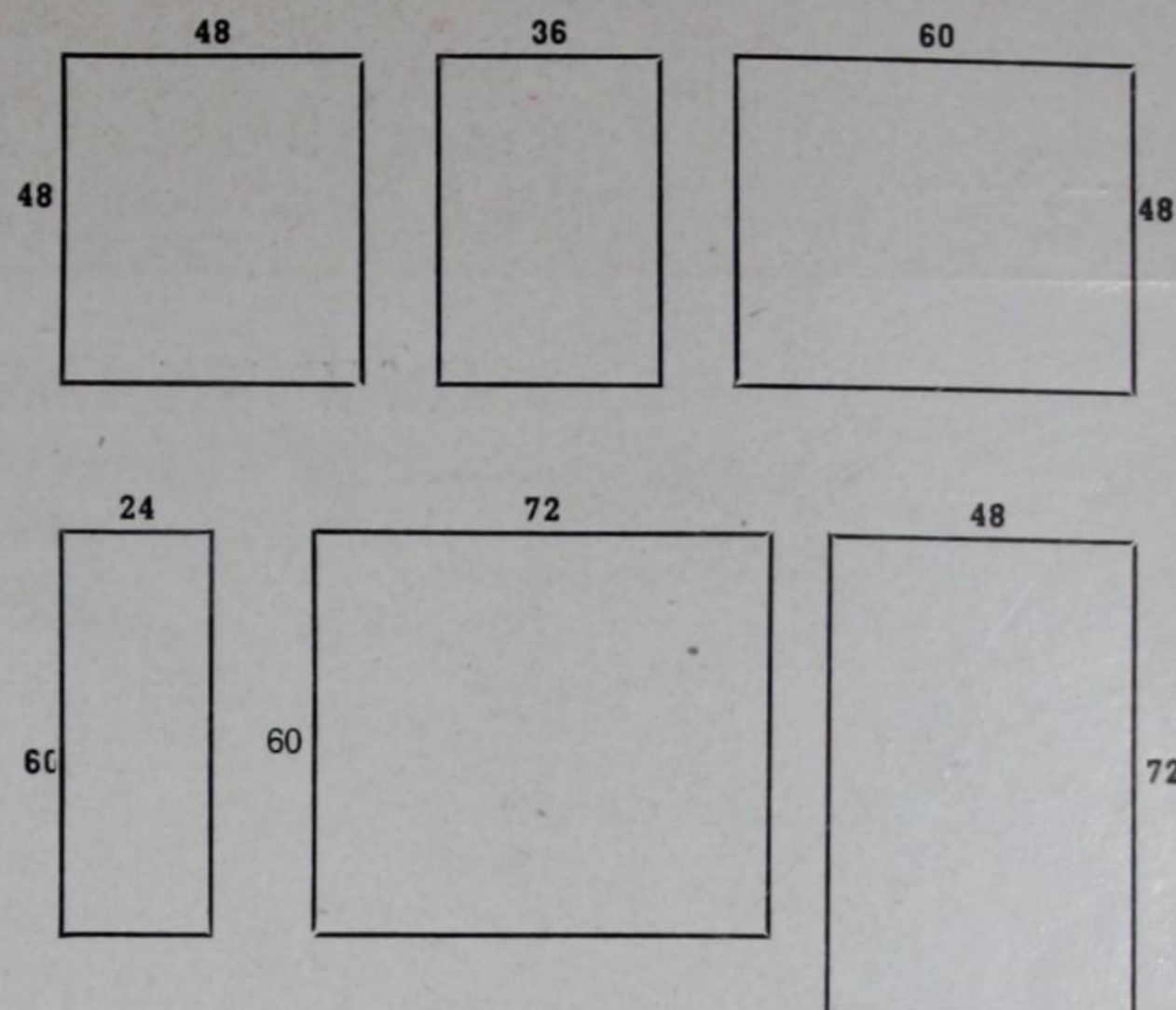


Yes, with Twindow, you can now have the big, bright windows you want . . . and at the same time reduce the costs of heating and air-conditioning! The reason? Twindow is an *insulating unit*—a window consisting of two or more panes of glass with *hermetically sealed* air between. With Twindow you can flood your rooms with daylight, yet have warmth right up to the pane—no 'cold area' or downdraft!

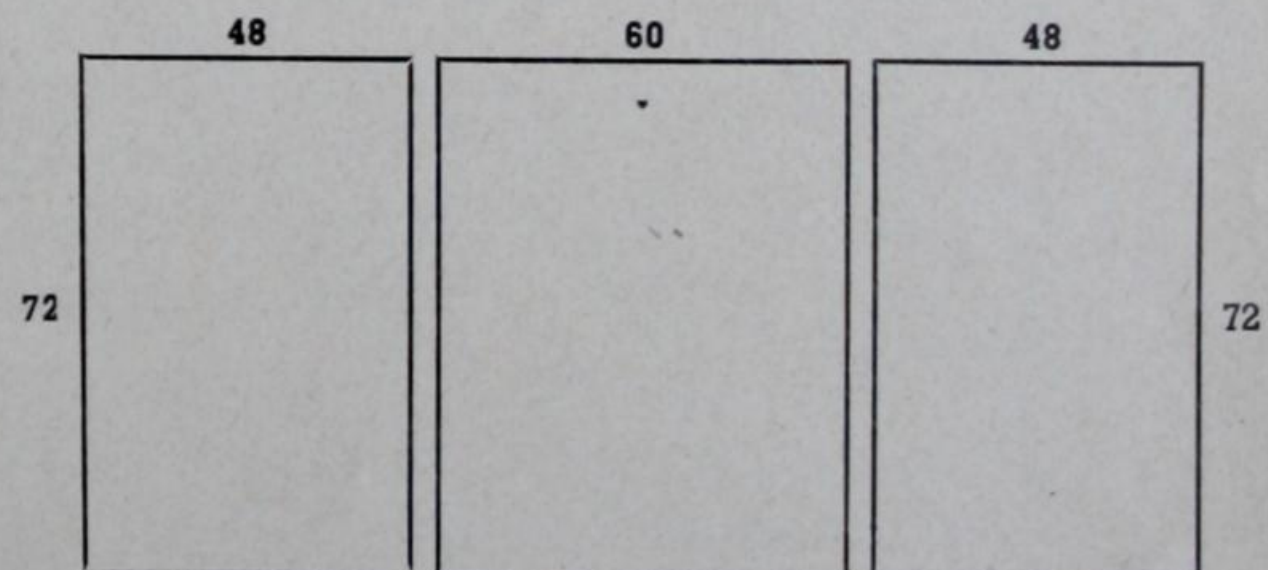
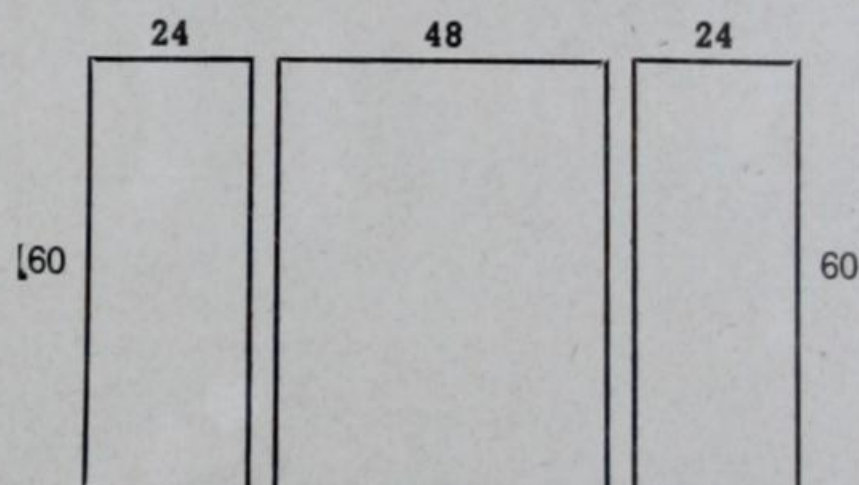
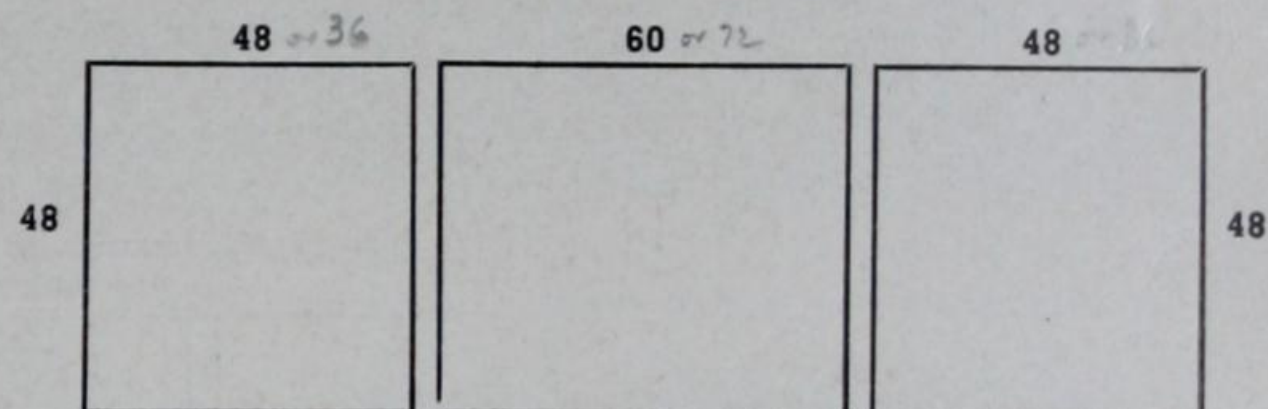
The solid, stainless steel frame that protects these panes of glass is exclusive with Twindow . . . guards against the chipping and other hazards commonly associated with this type of glazing. It is your assurance that Twindow's hermetic seal *stays* sealed. Twindow is now made in Canada!

## TWINDOW MAKES HOUSEWORK EASIER

Picture windows of Twindow cheer and brighten your rooms—bring the outside right into your home. Insulating units permit larger windows which in turn mean fewer corners to clean, less risk of breaking your fingernail or scratching your knuckles while cleaning. Because your Twindow unit has a hermetically sealed airspace between the two pieces of plate glass, the inner surfaces are permanently protected from dirt . . . never soil. Twindow has only two surfaces which require cleaning. Because of its insulating layer of dry air, Twindow virtually prevents condensation in winter. Not only does this give you clear windows but it minimizes damage caused by water dripping from windows, which deteriorates sills and floors, and stains fabrics, carpets and wall paper. Larger windows mean fewer crosspieces in your windows . . . requiring less cleaning and painting. Twindow eliminates the drudgery of putting up and taking down storm sash as well as storing, repainting and reglazing them.



## ↑ ORDER THESE STANDARD SIZES ↑



## STANDARD SIZE UNITS ARE VERSATILE

Hobbs standard size units of Twindow have been designed to combine in a variety of ways, permitting the glazing of window areas as shown above. Use standard size units to develop a suitable combination for the area in which you wish to instal Twindow. The Hobbs salesman will be pleased to assist you. Call or write your nearest Hobbs branch for a quotation.

→	36 x 48	60 x 48	24 x 60
	48 x 48	72 x 48	72 x 60

Storefronts

Art Glass

General Glass  
Catalogues

Miscellaneous



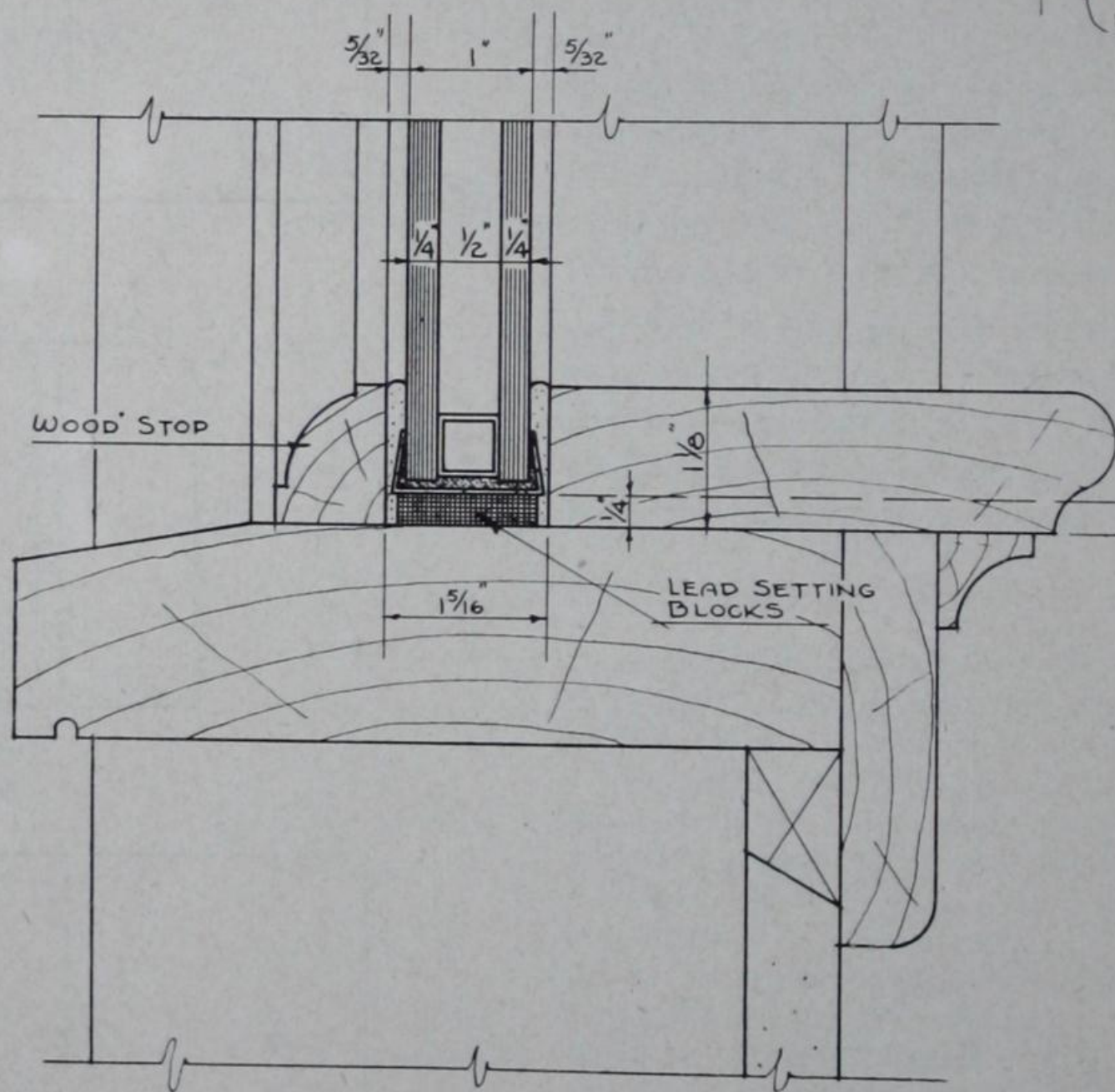
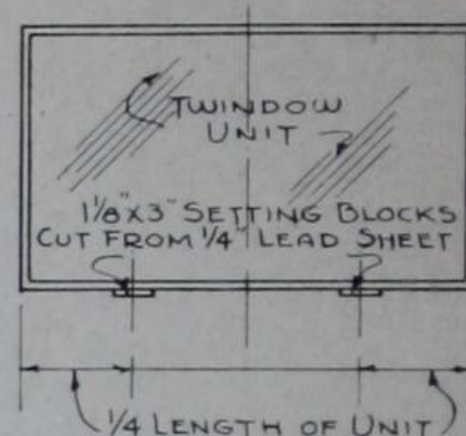
# TWINDOW --the NEWEST hermetically-sealed unit

## HOW TO INSTALL TWINDOW

1. Use good grade of linseed oil base type putty or good glazing compound, free from corrosive materials.
2. Have putty soft when bedding in sash.
3. Press Twindow in evenly. Do not force it in so as to twist the unit.
4. Point up around all edges. Fill all voids before face puttying.
5. Lights over 96 united inches must be supported on soft lead setting blocks.
6. Setting blocks should be located in from each corner a distance of  $\frac{1}{4}$  the horizontal edge of the light.

### PLATE & PLATE TWINDOW $\frac{1}{2}$ " AIR SPACE

NOTE: RABBET OF SIMILAR SIZE TO BE PROVIDED AT SIDE AND HEAD JAMBS

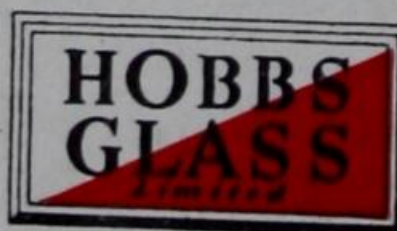


### BRANCHES COAST TO COAST

MONCTON  
QUEBEC  
THREE RIVERS  
MONTREAL

BRANTFORD

OTTAWA  
OSHAWA  
TORONTO  
HAMILTON



LONDON  
WINDSOR  
FT. WILLIAM  
WINNIPEG

REGINA  
MOOSE JAW  
SASKATOON  
VANCOUVER

VICTORIA

Look to **GLASS** for better living--come to **HOBBS** for glass!





# GLASS BLOCKS

A practical, money-saving material for industrial construction

Storefronts

Art Glass

General Glass  
Catalogues

Miscellaneous





## PC GLASS BLOCKS

1. Flood working areas with natural daylight
2. Aid temperature and humidity regulation.
3. Cut maintenance costs.
4. Reduce condensation on light-transmitting areas.
5. Clean easily and thoroughly.
6. Create a neat, modern appearance.
7. Permit greater privacy.
8. Provide effective sound insulation.
9. Increase usable floor area.
10. Possess insulating qualities which reduce heating costs.
11. Prevent infiltration of harmful dust and grit.

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Cleanliness and Privacy in Office Areas.....	5
Improved Building Appearance.....	6
Cut Maintenance Costs.....	7
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Use in Precision Plants.....	11
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**HERE'S THE FULL STORY** of glass block construction as it applies to many lines of manufacturing. As you read it, you'll readily see why the use of glass blocks can mean more efficient production in your plant. It's really the story of how PC Glass Blocks have helped other manufacturers in many different industries solve many of their pressing problems.

One manufacturer installed PC Glass Blocks for one reason only: to get more daylight into his plant. After the Glass Blocks were in place, he found not only that he then had an abundance of natural light in the working areas of his plant but also that temperature control was improved, the load on his air-conditioning equipment was reduced and he had closed up countless crevices through which gritty dust had formerly sifted.

Each year more and more plant managers discover that glass block construction offers a practical, economical answer to troublesome questions of production and maintenance. That's why so many of them replace worn, rotted sash with corrosion-resistant Glass Blocks. Many an installation has paid for itself out of savings on cleaning and maintenance costs.

As you look through this book, you will recognize one or more ways in which PC Glass Blocks can help you do a better job and cut production costs at the same time. Listed above are the eleven principal advantages of glass block construction. They are described and illustrated in the following pages.



BECAUSE PC Glass Blocks provide good insulation it is possible to use them for large light-transmitting areas without disturbing room temperature or humidity. Though they retard heat transfer, PC Glass Block panels flood working areas with generous quantities of natural daylight, softly diffused by the pattern in the faces of the blocks.

Better lighting means better vision for workmen — with resulting improvement in quality of workmanship. This extra daylight is an economy, for it helps reduce the need for artificial lighting. And remember, PC Glass Blocks give you this valuable daylight with far less solar heat transmission than you would experience with equal areas of ordinary windows.

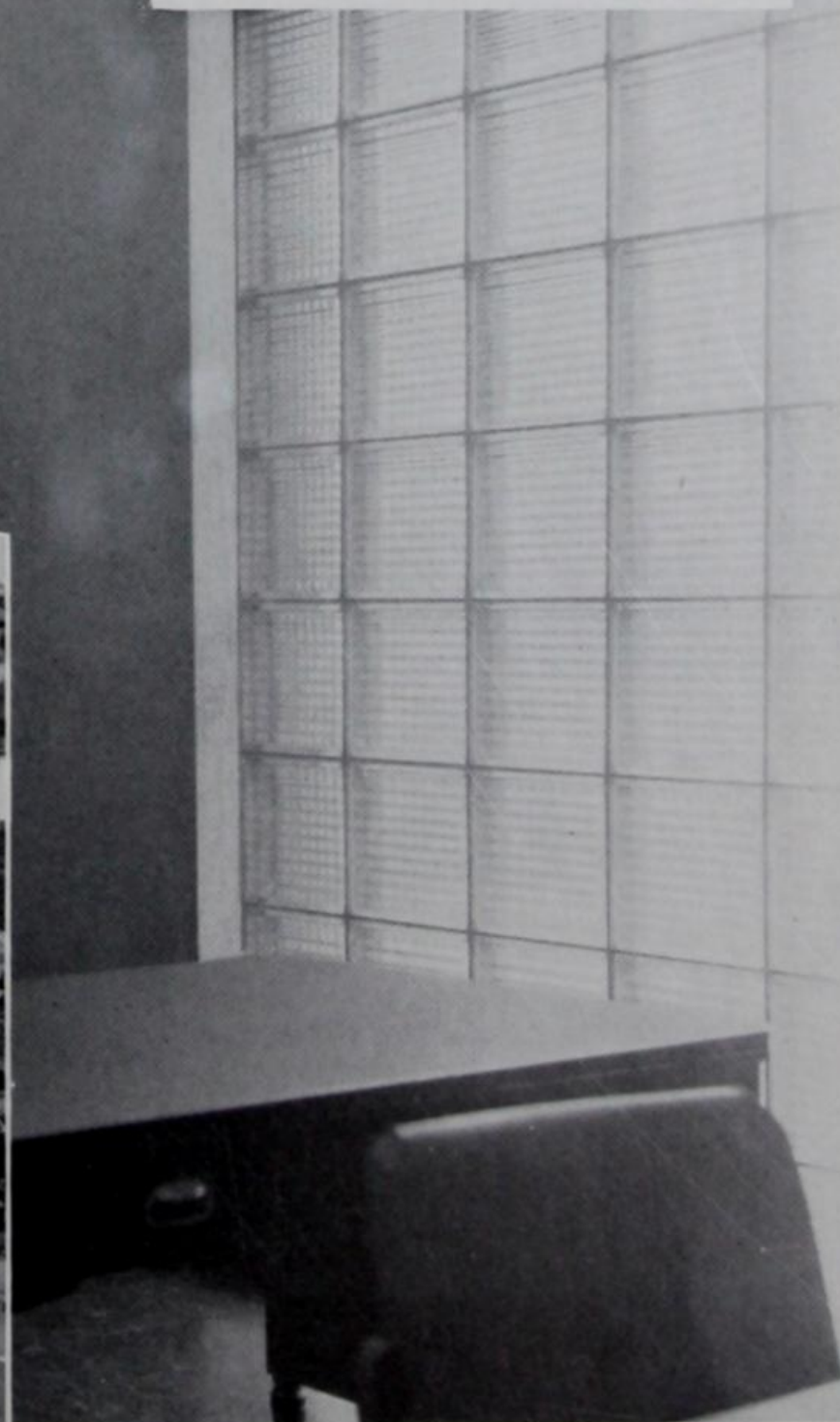
## PLENTY OF NATURAL DAYLIGHT TRANSMITTED THROUGH AN

## *Insulated Wall*

Employees work better in a well-lighted, cheerful atmosphere. Exacting, detailed work is done more carefully when distracting sights and sounds are excluded by Glass Blocks.



When PC Glass Blocks were installed here, plenty of daylight was directed over wider areas, infiltration of dust and dirt was completely eliminated, temperature and humidity were more easily controlled.



Storefronts

Art Glass

General Glass  
Catalogues

Miscellaneous

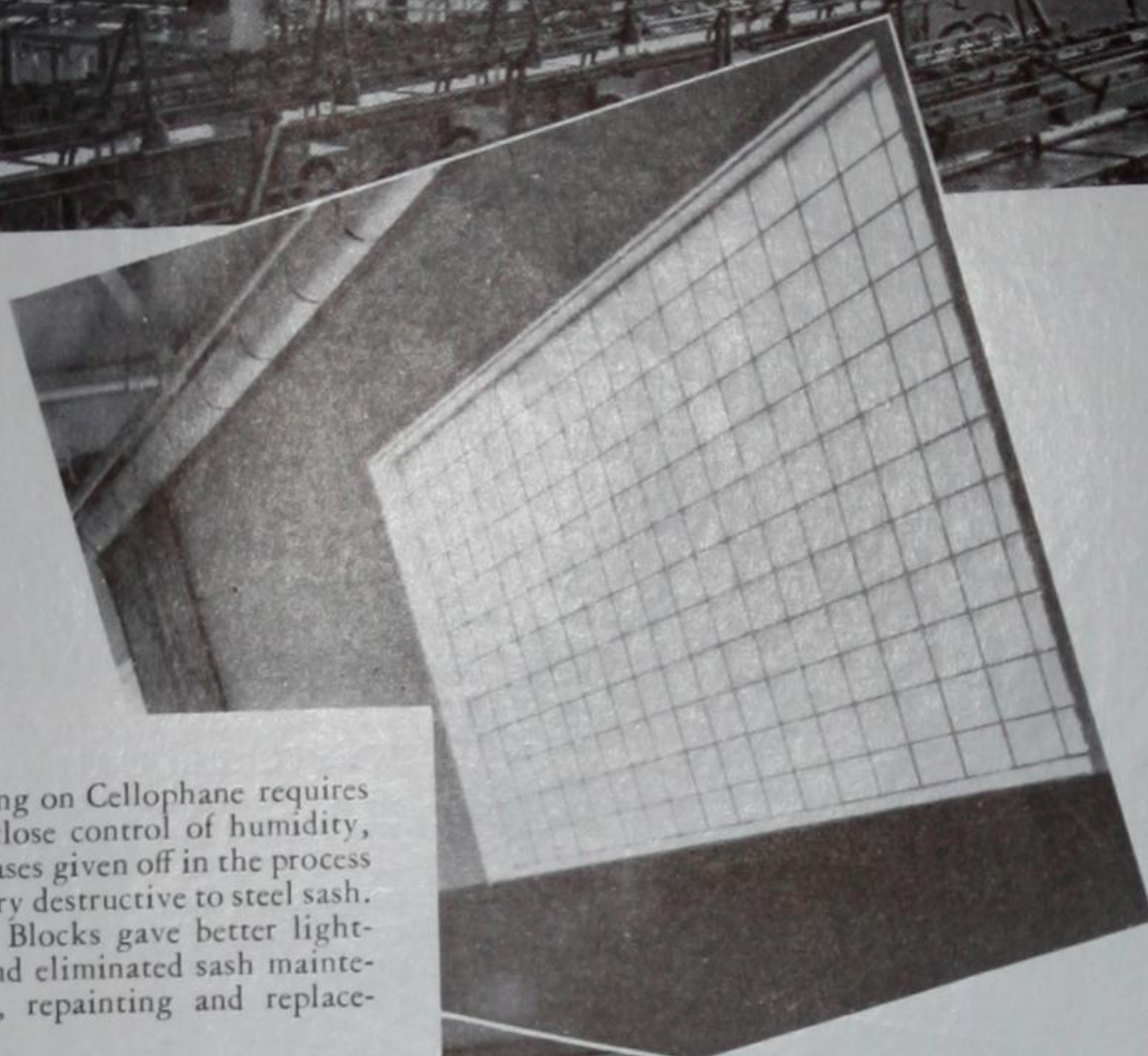




"Today, with the thermometer down to zero, we really go to the full benefit of Glass Block. We have some fine gauge machinery within three feet of the blocks. Should we have kept ordinary windows, I am sure we would have been unable to operate this equipment on a day like this kind."

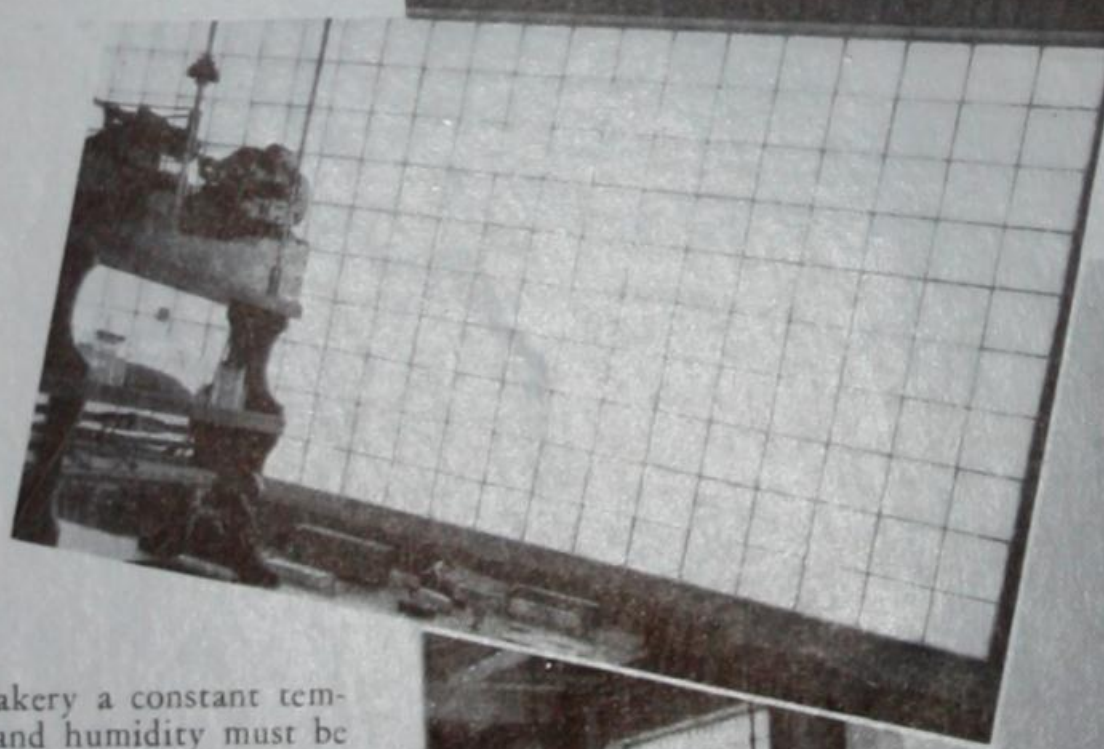


T. M. REG. U. S. PAT. OFF.



Printing on Cellophane requires very close control of humidity, and gases given off in the process are very destructive to steel sash. Glass Blocks gave better lighting and eliminated sash maintenance, repainting and replacement.

Without obstructing the view, PC Vue Blocks exclude dust and noise from this laboratory in which control of temperature and humidity are particularly important.



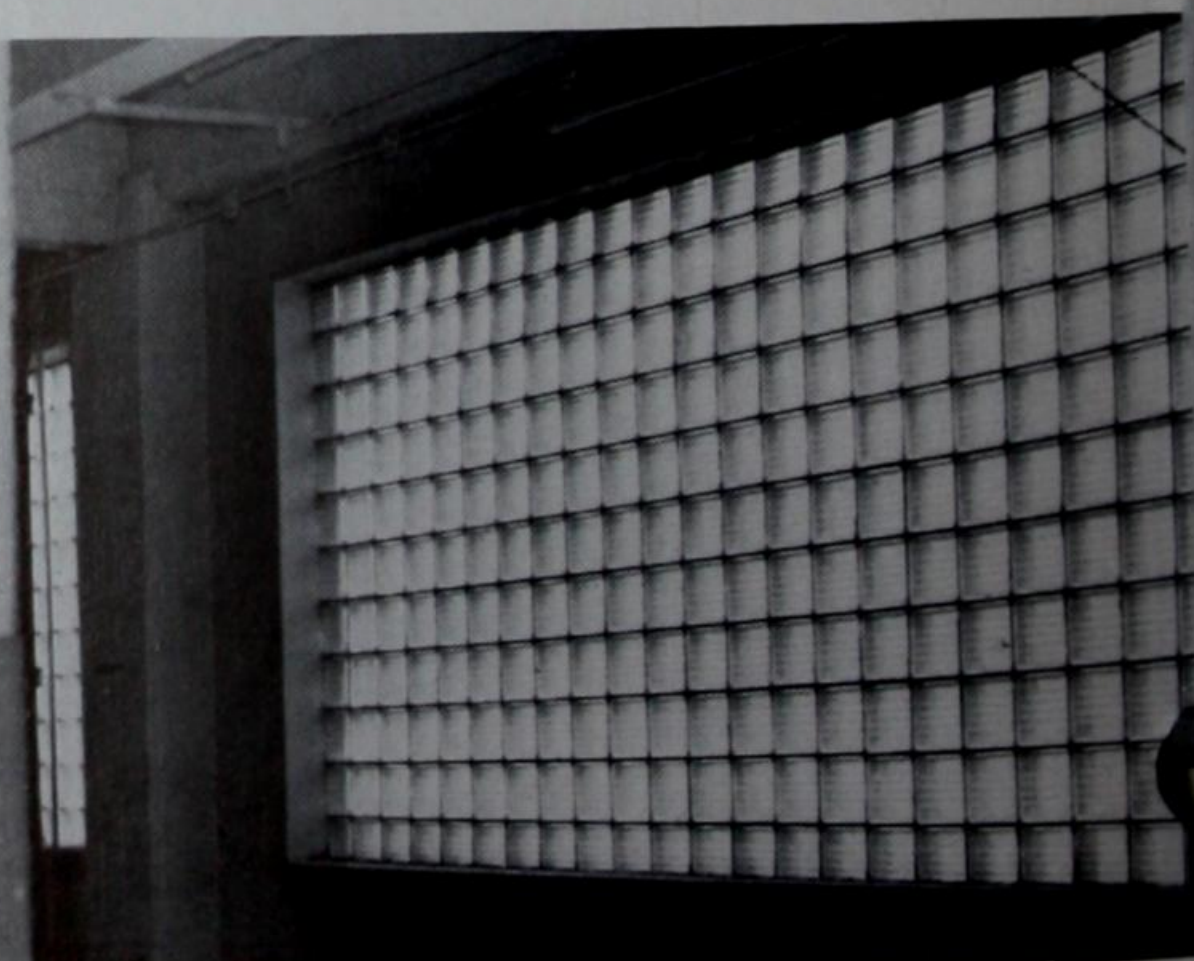
In this bakery a constant temperature and humidity must be maintained during the 24 hours required for dough to set. PC Glass Blocks help maintain desired levels.



## WHERE PC GLASS BLOCKS ARE USED-

### TEMPERATURE AND HUMIDITY CAN BE CLOSELY REGULATED

In plants where machinery or materials are affected by heat or moisture, PC Glass Blocks have proved especially valuable. Because heat loss is cut down and temperatures are held more constant, condensation is lessened and humidity control is simplified. Where these factors are regulated by air-conditioning equipment, the load on such equipment is greatly reduced, the system does a better job and often effects appreciable savings in operating costs.

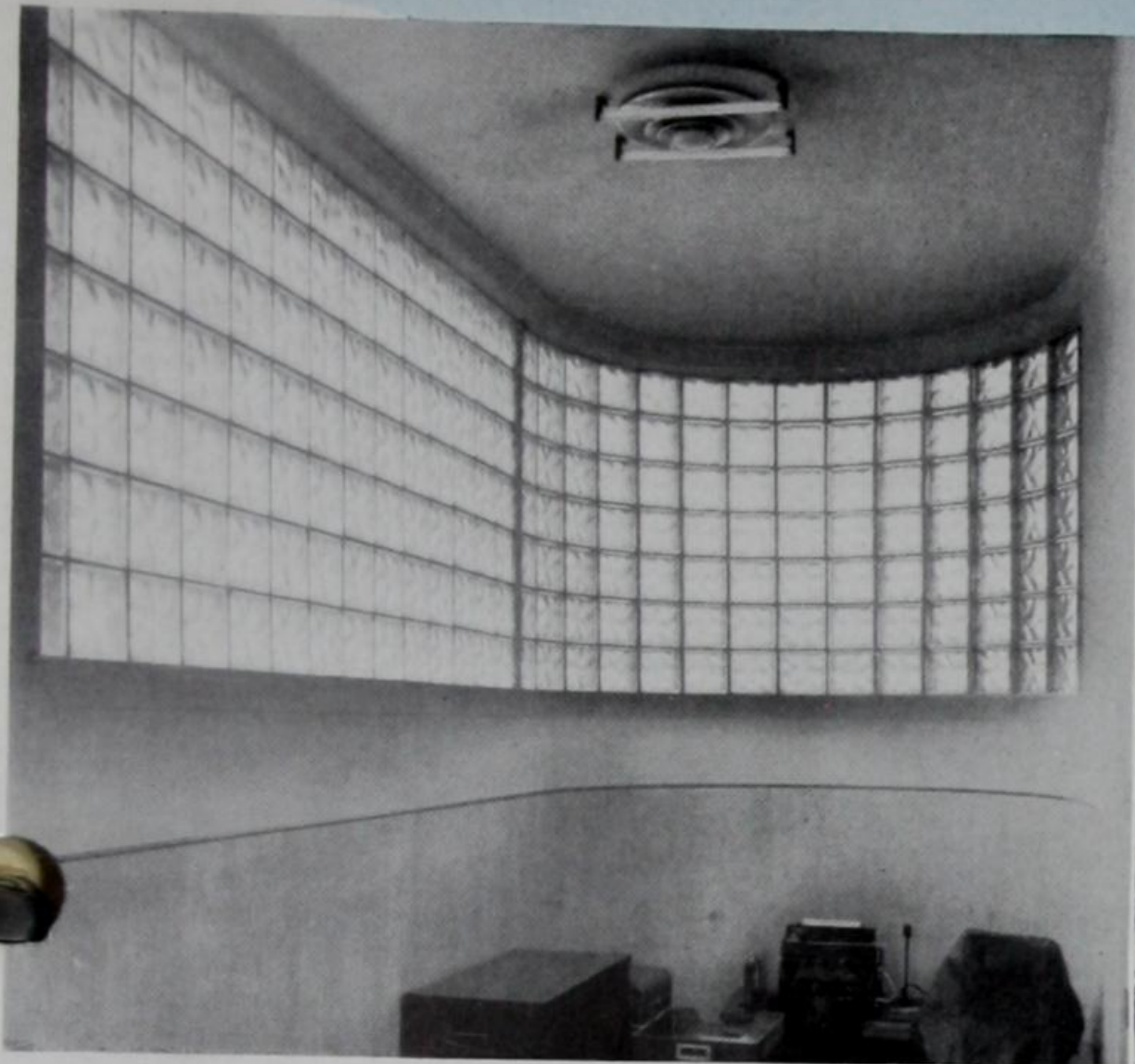




# PC Glass Blocks ...

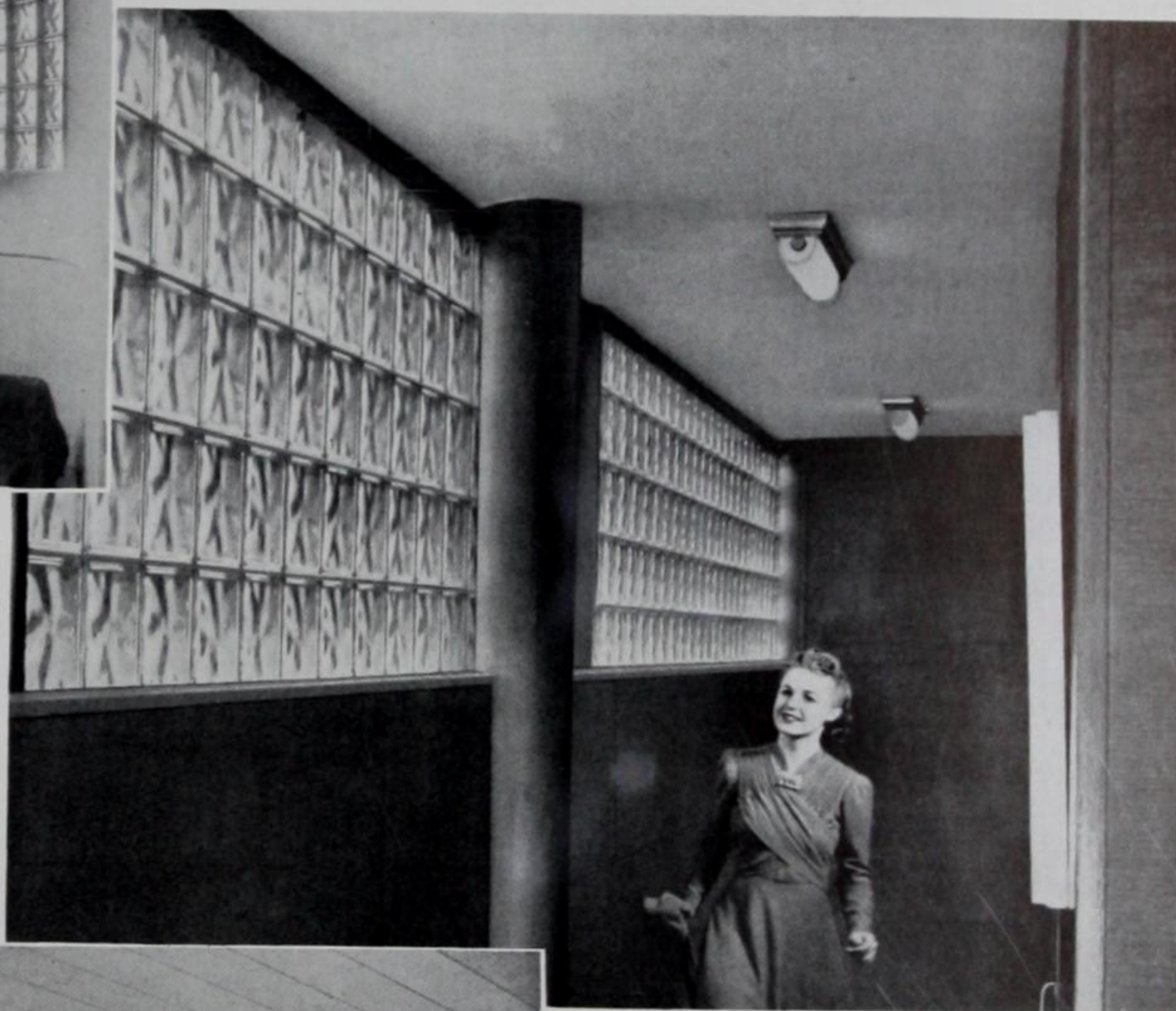
- EXCLUDE DUST
- REDUCE NOISE
- ASSURE PRIVACY

Where offices, laboratories, dispensaries and drafting rooms are in factory buildings, PC Glass Blocks are ideal for confining plant dust and noise without excluding light. Translucent but not transparent, they safeguard the privacy of executive and research departments. Where limited visibility is desired, PC Vue Blocks may be inserted in the panel. Smart in appearance and easily cleaned, PC Glass Blocks make plant offices as attractive and secluded as those in any modern office building.

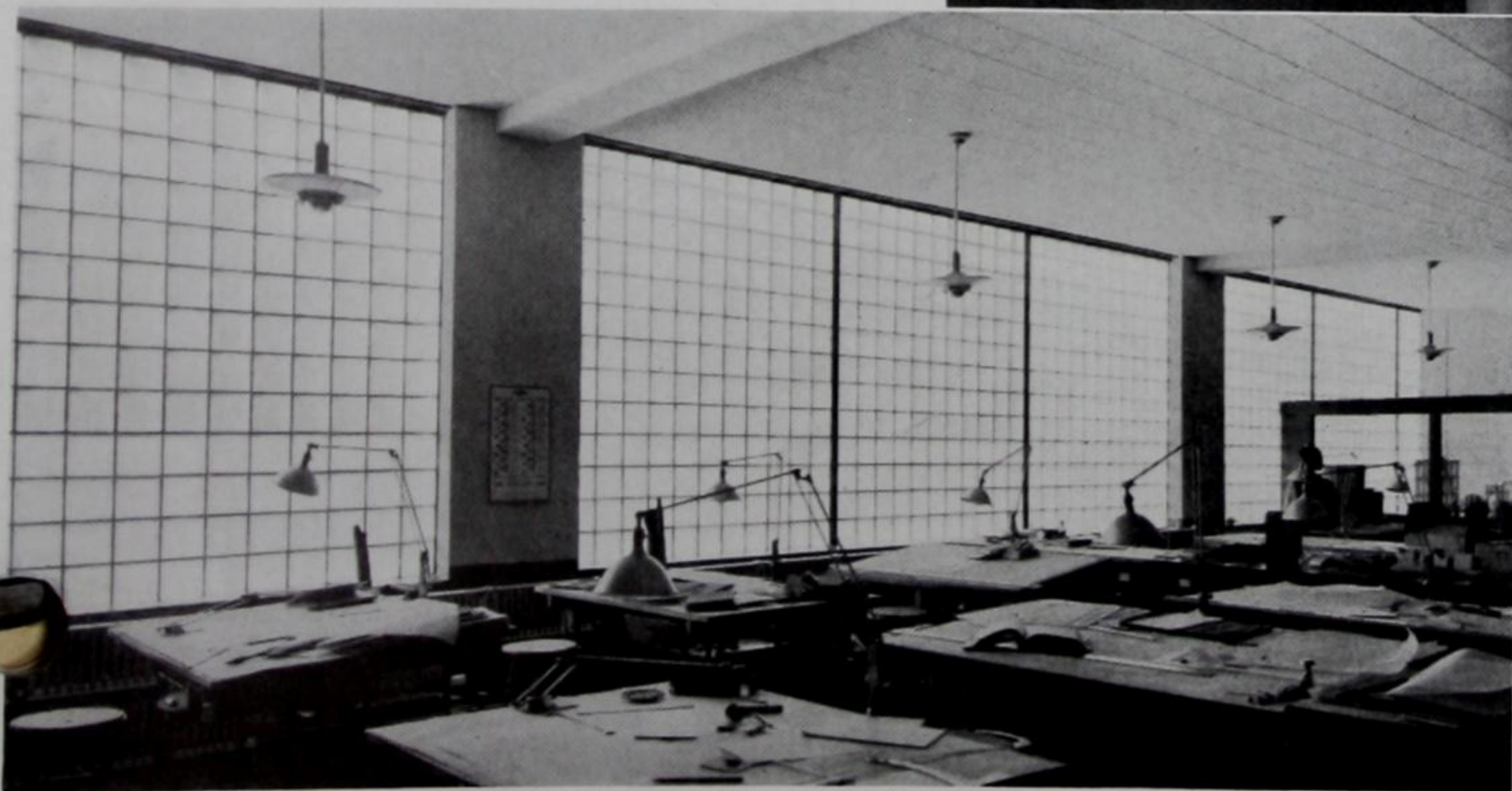


This plant office receives plenty of natural light through PC Glass Blocks. Distracting noises are deadened, dust is completely excluded.

Workers in this drafting room enjoy privacy, temperature comfort and an abundance of daylight since PC Glass Blocks were installed.



Traffic in this corridor does not disturb the workers on the other side of these Glass Block partitions.



Storefronts

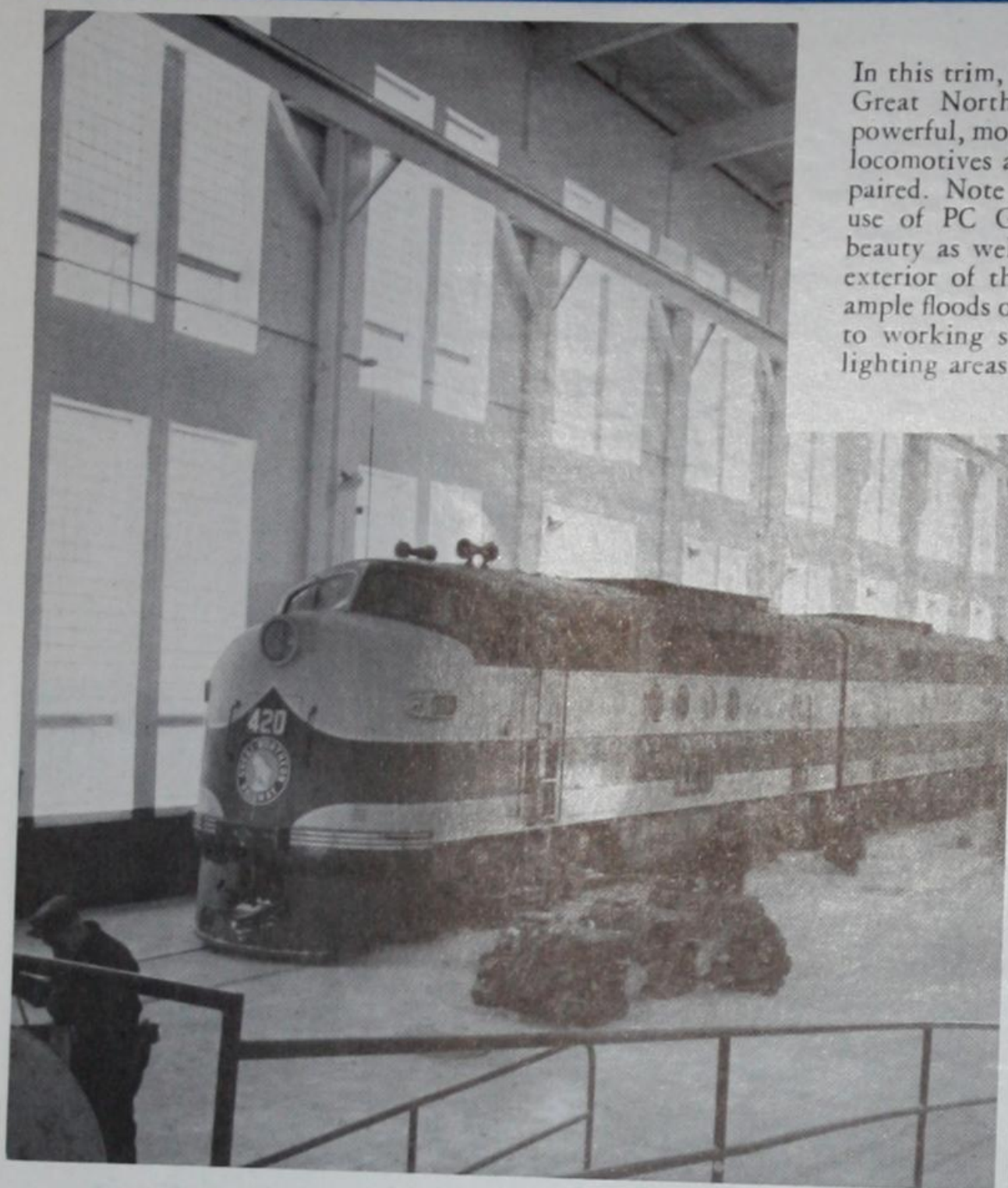
Art Glass

General Glass  
Catalogues

Miscellaneous



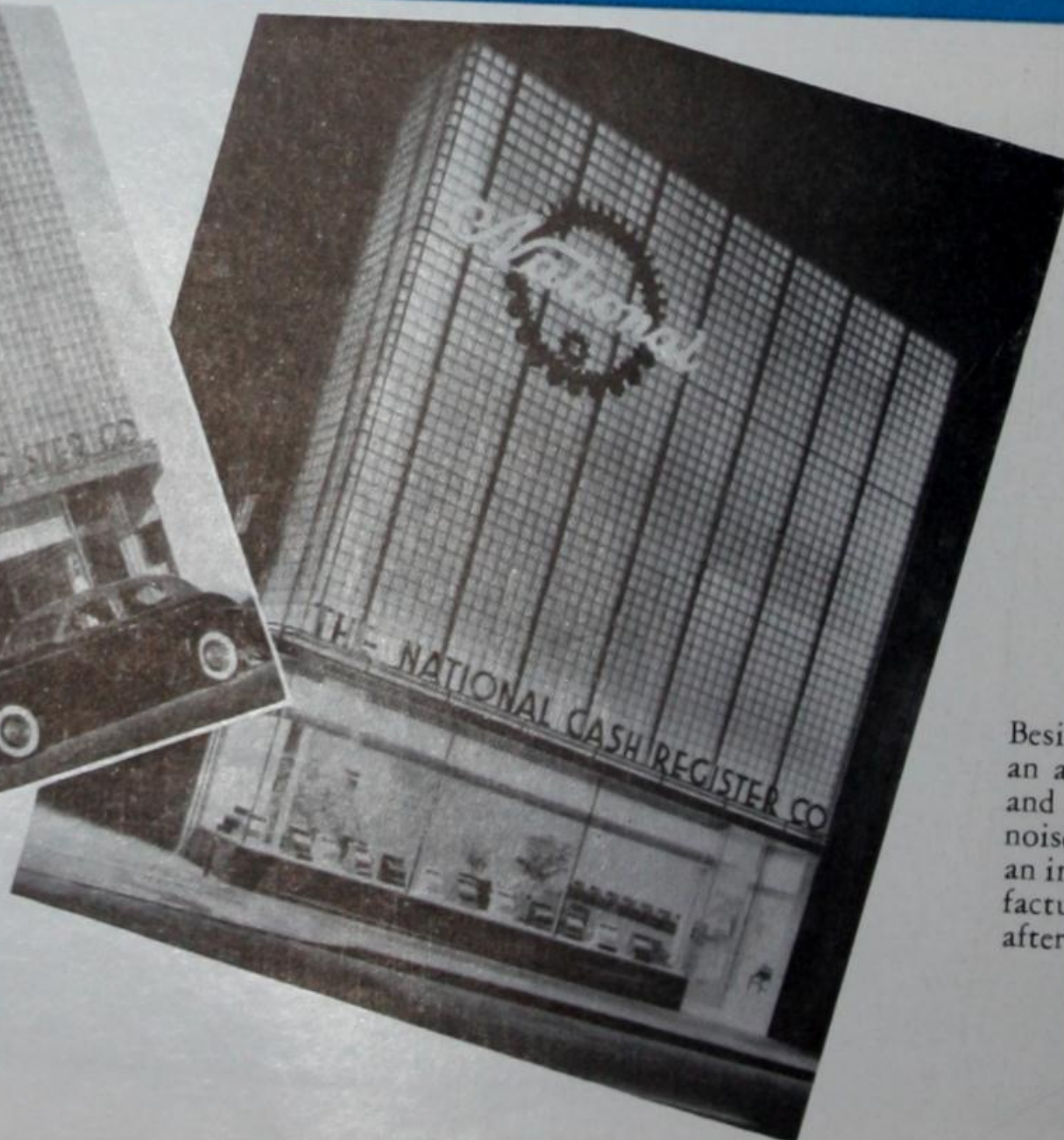
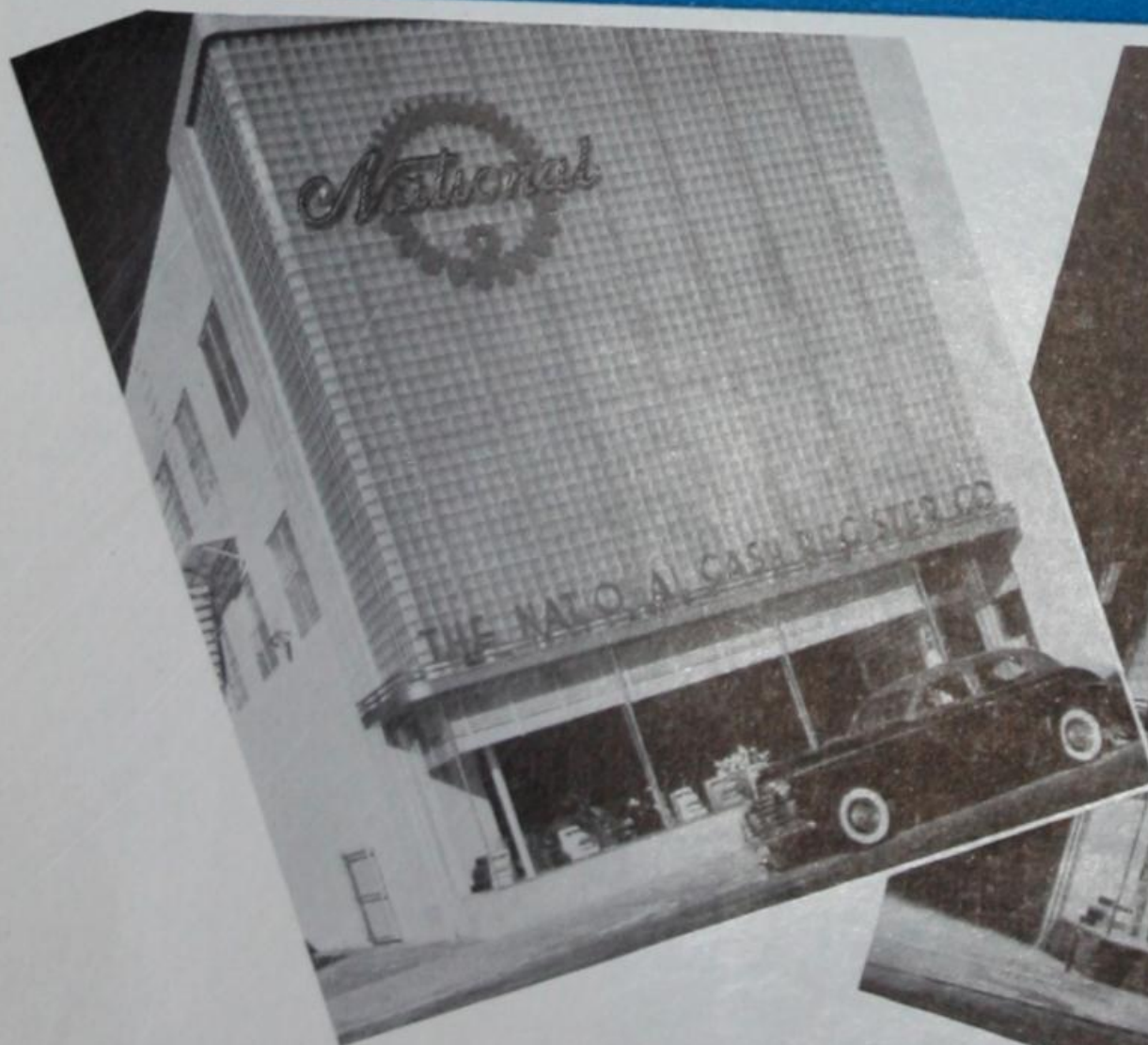
## PC Glass Blocks give a clean, neat appearance



In this trim, modern shop of the Great Northern Railway, the powerful, modern Diesel-Electric locomotives are serviced and repaired. Note how the extensive use of PC Glass Blocks lends beauty as well as utility to the exterior of the building, directs ample floods of diffused daylight to working space remote from lighting areas.



## PC Glass Blocks make an effective advertisement

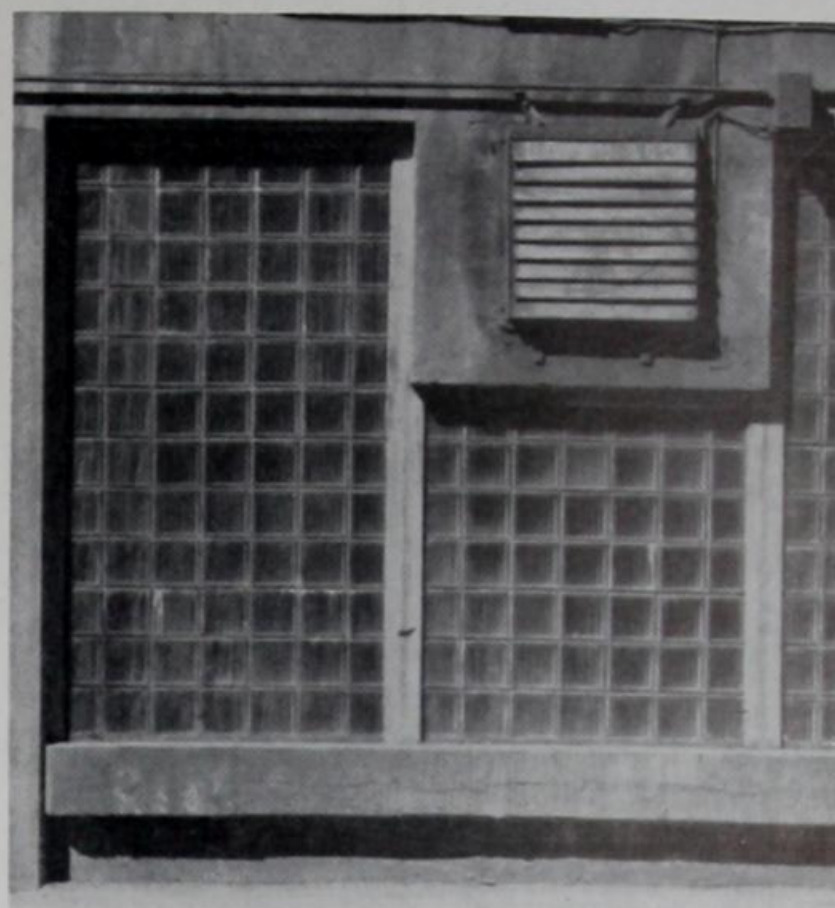
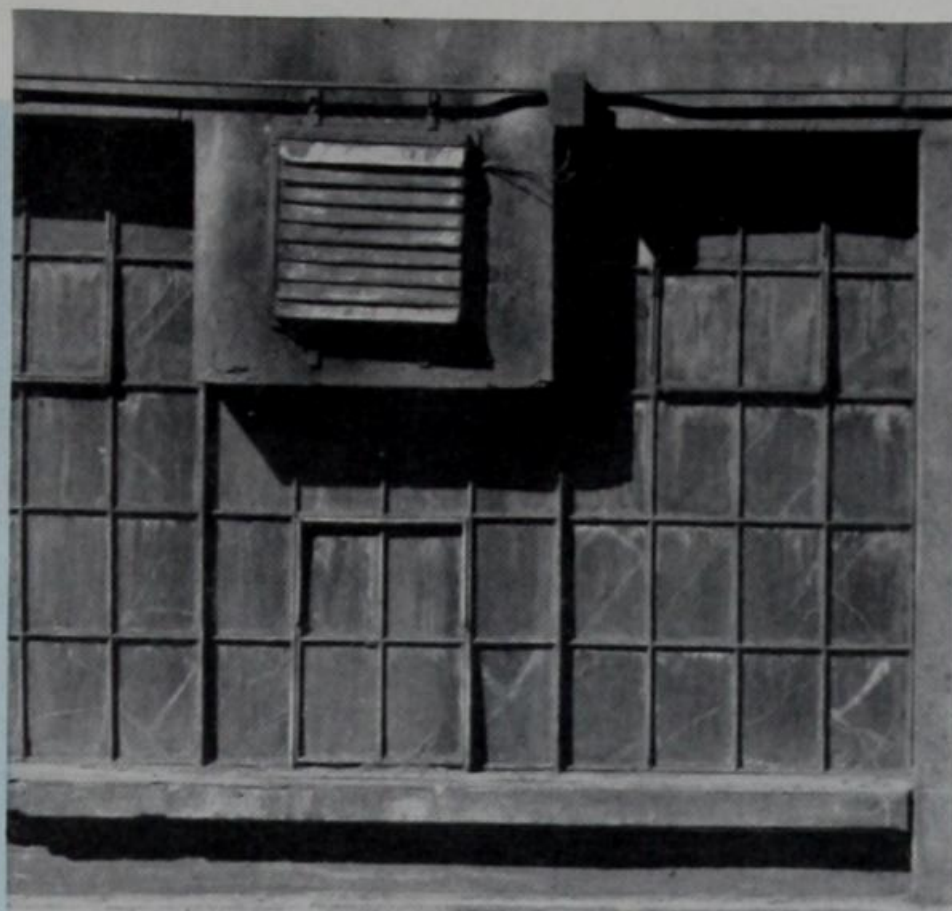


Besides flooding the interior with an abundance of natural daylight and excluding distracting traffic noises, these PC Glass Blocks make an impressive display of the manufacturer's trade-mark before and after sundown.



# PC Glass Blocks eliminate sash maintenance

Sash replacement is a constant expense in plants where high acid atmospheres and excessive humidity are encountered. Under these conditions, PC Glass Block panels will not pit, check, rot or crack. There is no sash to rot or corrode—that's why the costly repair-and-replacement problem is eliminated. Should replacement of an individual block be required, it can be done easily by a regular mason.



## *Cleaning*

IS EASY,  
QUICK AND THOROUGH

Some plants using glass blocks wash them down occasionally with a hose and a long-handled brush. Others just wipe the panel with a damp cloth. Either way is quick, inexpensive and thorough.

A glass block panel is all one big area—with no individual panes to wash and no muntins to wipe dry. Outside surfaces are so designed that dirt washes from them easily. The translucent effect of glass blocks keeps them looking clean long after ordinary clear glass looks spotty or streaked from dirt particles. Glass blocks need cleaning less often—and the job is easier when required.

Storefronts

Art Glass

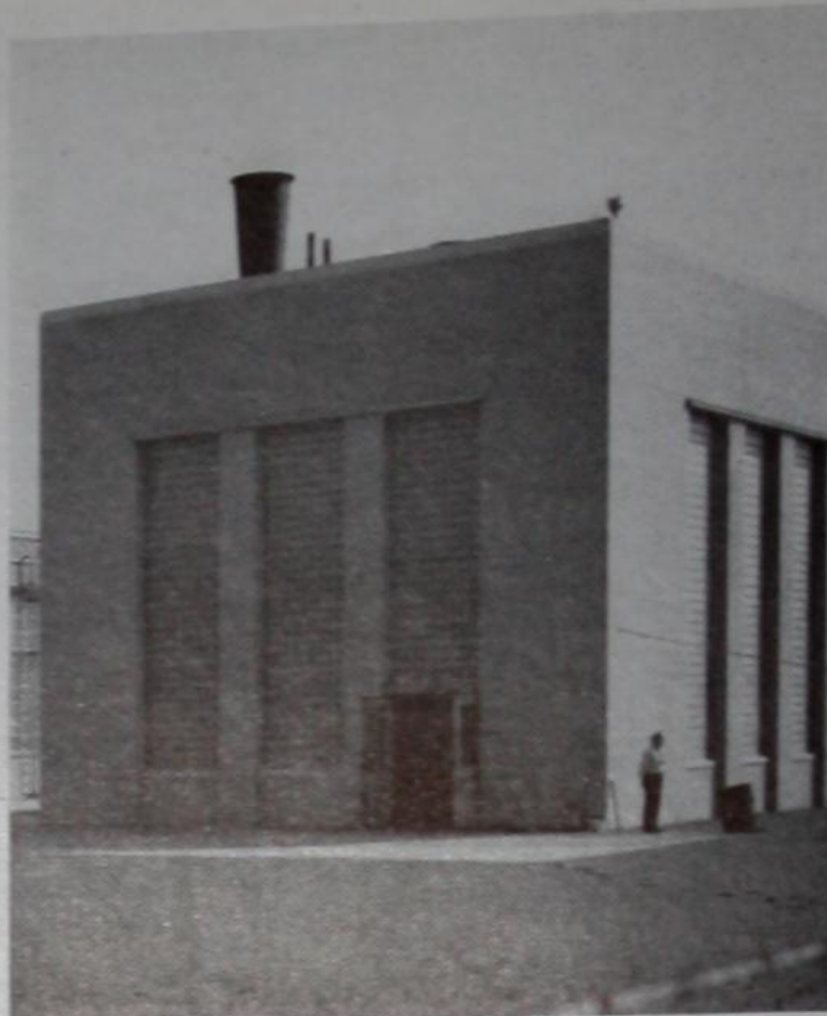
General Glass  
Catalogues

Miscellaneous

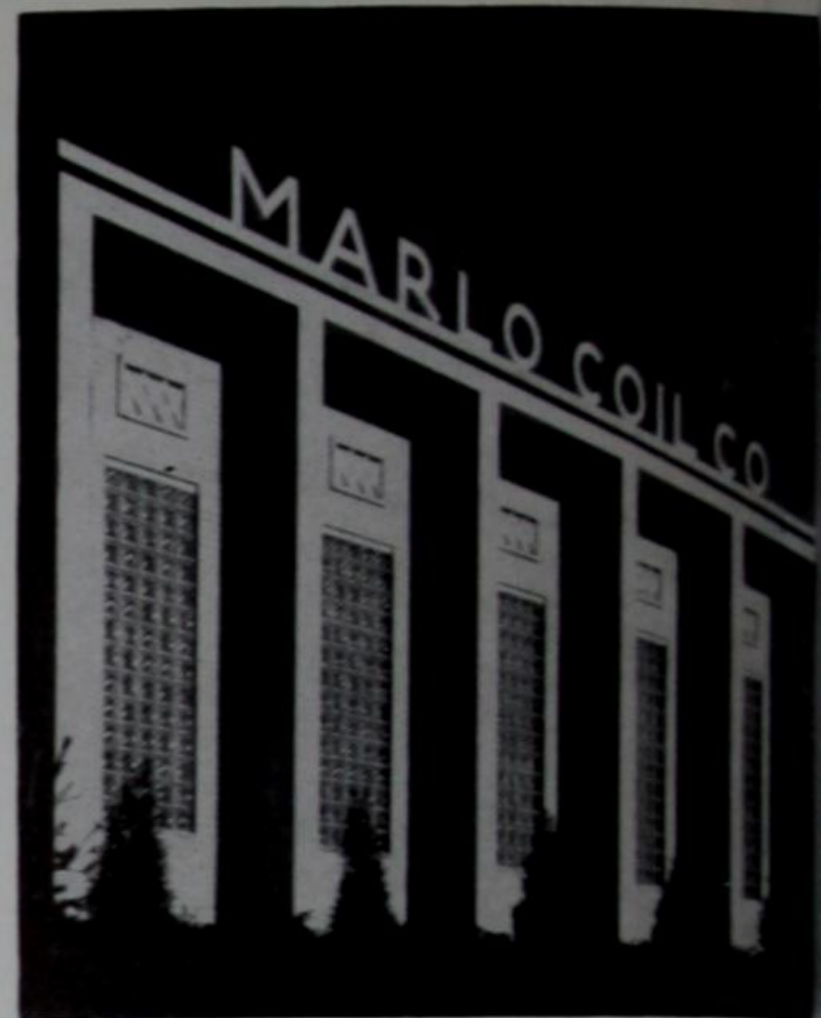




**DAIRY** — The neat, clean exterior of this dairy will appeal to customers. Inside, PC Glass Blocks provide plenty of light without glare, exclude dust and dirt from milk processing areas, and permit close control of temperature.



**POWER PLANT** — PC Glass Blocks diffuse an abundance of daylight throughout this power plant with a minimum heat loss and maximum privacy.



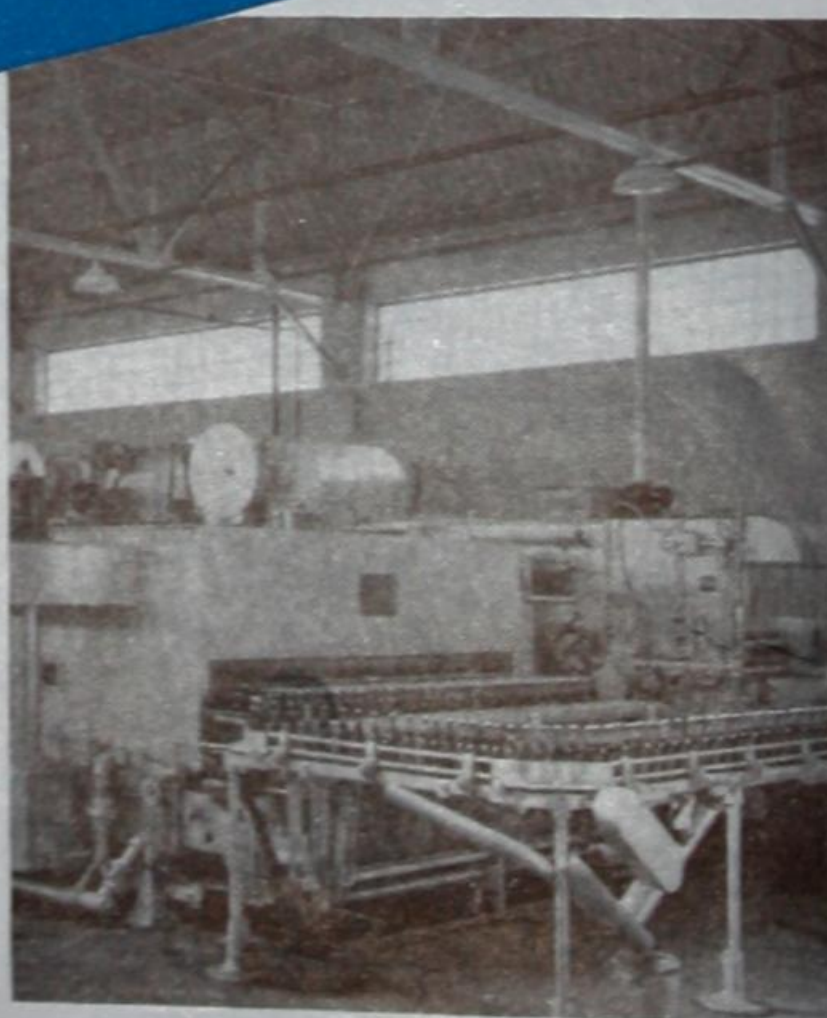
**MANUFACTURING PLANT** — In this plant, Glass Blocks reduce the load on the air-conditioning system. At the same time they add an effective touch to building's modern design.



# GLASS BLOCKS



**LAUNDRY** — Privacy is assured, distracting outside views are excluded by using PC Glass Blocks in eye-level lighting panels.



**BOTTLING PLANT** — The high humidity prevalent in bottling plants makes sash maintenance a recurrent expense. PC Glass Blocks eliminate this trouble, reduce maintenance costs, give better control of temperature and humidity.



**RAILROAD ROUNDHOUSE** — Glass Blocks provide a maximum of diffused daylight throughout work areas with a minimum expense for the maintenance of window space.





**DRUG FACTORY** — The light-directing properties of PC Glass Blocks insure ample natural light. Their insulating value lessens heat losses through large panels.



**ADMINISTRATIVE OFFICES** — Exclusion of dirt and noise from nearby factory buildings was an important reason for choosing PC Glass Blocks for this office building. Workers enjoy diffused daylight, even temperature and complete privacy.



**FOOD PLANT** — The need for clean air in food processing areas and for the close regulation of temperature and humidity made the choice of PC Glass Blocks a "natural" in this food plant. Glass Blocks make this building attractive to workers and customers alike.

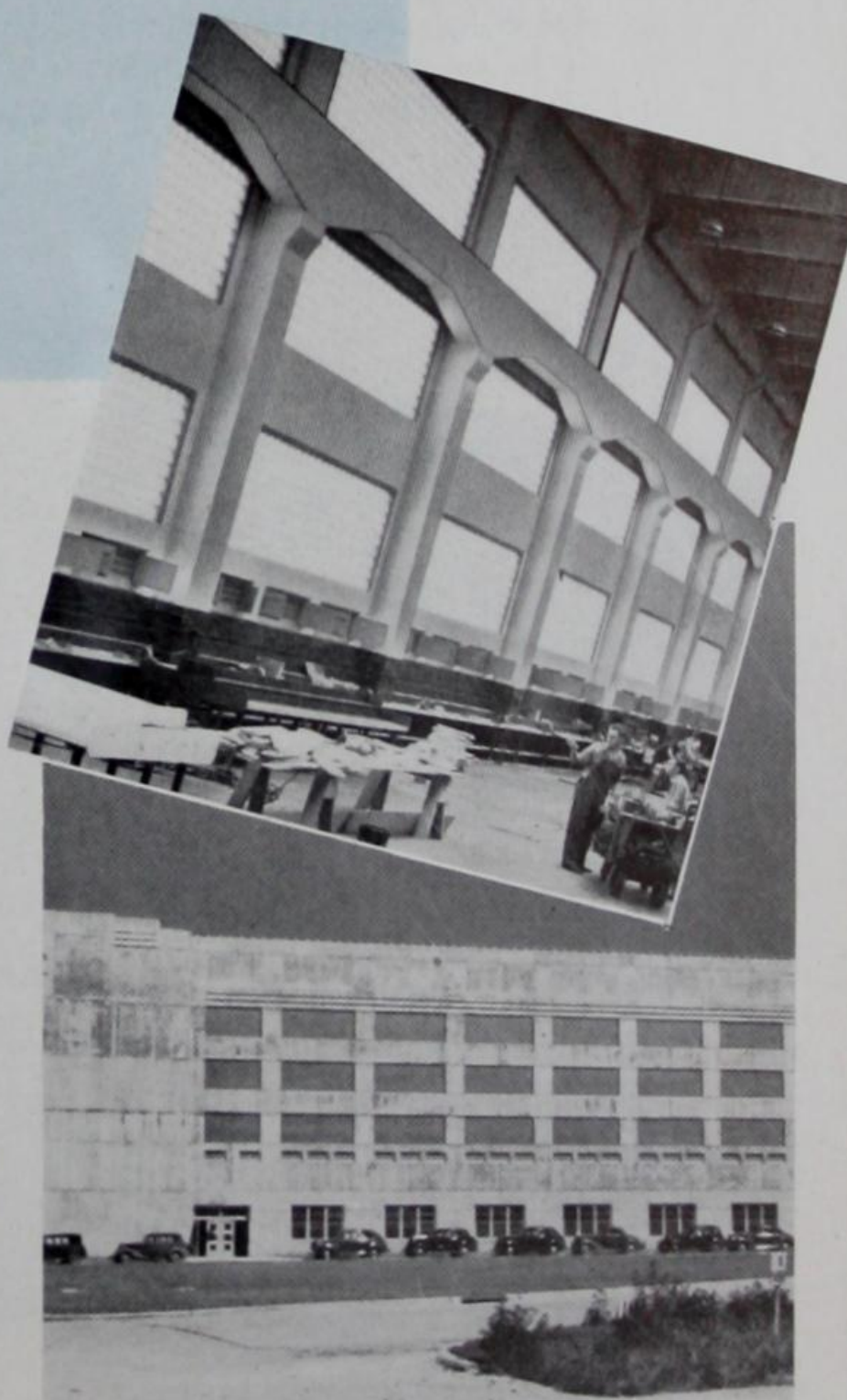
*helping solve problems  
many industrial plants*



**EMPLOYEES' SHOWERS** — These glass block partitions are easily cleaned, impervious to the corrosive action of moisture and transmit the largest possible amount of daylight to the interior of the building.



**BLEACHING AND DYEING PLANT** — "We are well satisfied," says the Morgan Dyeing and Bleaching Co., "with the glass blocks in our plant. Lighting and working conditions have improved considerably . . . plus the fact that our maintenance problem is over. The excessive amount of condensation and steam in our plant is quite an extreme test, and we are very well satisfied with the results."



**ARSENAL** — Architects and engineers faced a problem of supplying adequate natural light to acres of working space. PC Glass Blocks offered a solution which harmonizes perfectly with the architectural design of the structure.

Storefronts

Art Glass

General Glass  
Catalogues

Miscellaneous



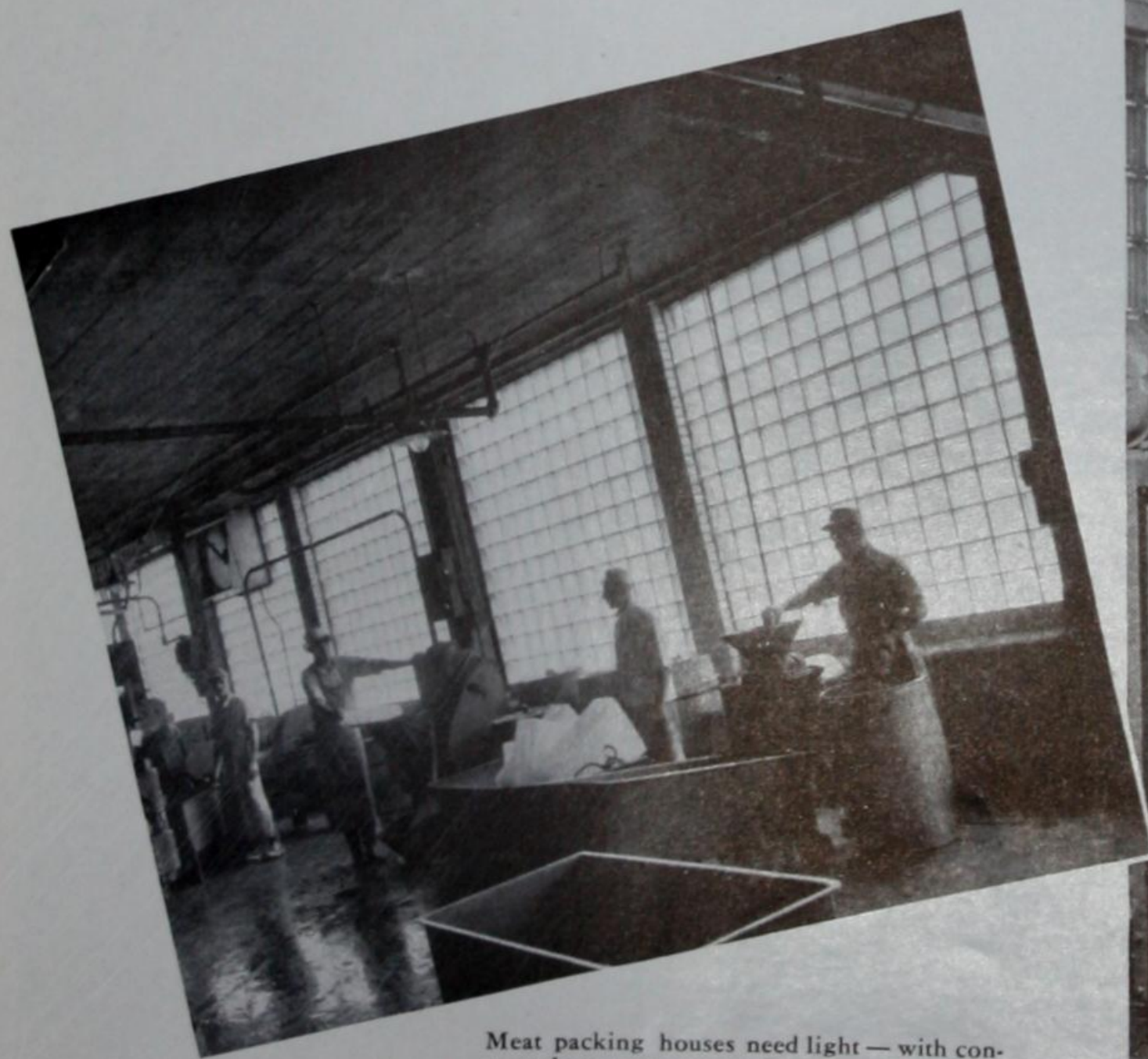


# Glass Blocks

## KEEP FOOD PLANTS SPIC AND SPAN

Food plant managers can't afford to take any chances on cleanliness. The pureness of the product, government inspection and public goodwill all demand that every part of the plant be spotlessly clean. Not only are PC Glass Block panels easy to clean, but their appearance gives the plant a bright, clean look that's bound to impress customers and workmen, too. Also important to cleanliness of both the plant and the product is the fact that glass block panels do not permit infiltration of dust, or other contaminating elements.

The high humidity and high temperature in some rooms present a difficult problem in condensation on ordinary window areas. Glass Blocks are being widely used in food plants because they reduce condensation to a marked degree — and because they eliminate costly maintenance resulting from corrosion of ordinary sash under these conditions. Where rooms must be kept cold, the insulation provided by glass block panels helps keep room temperatures more constant and lightens the load on cooling equipment.

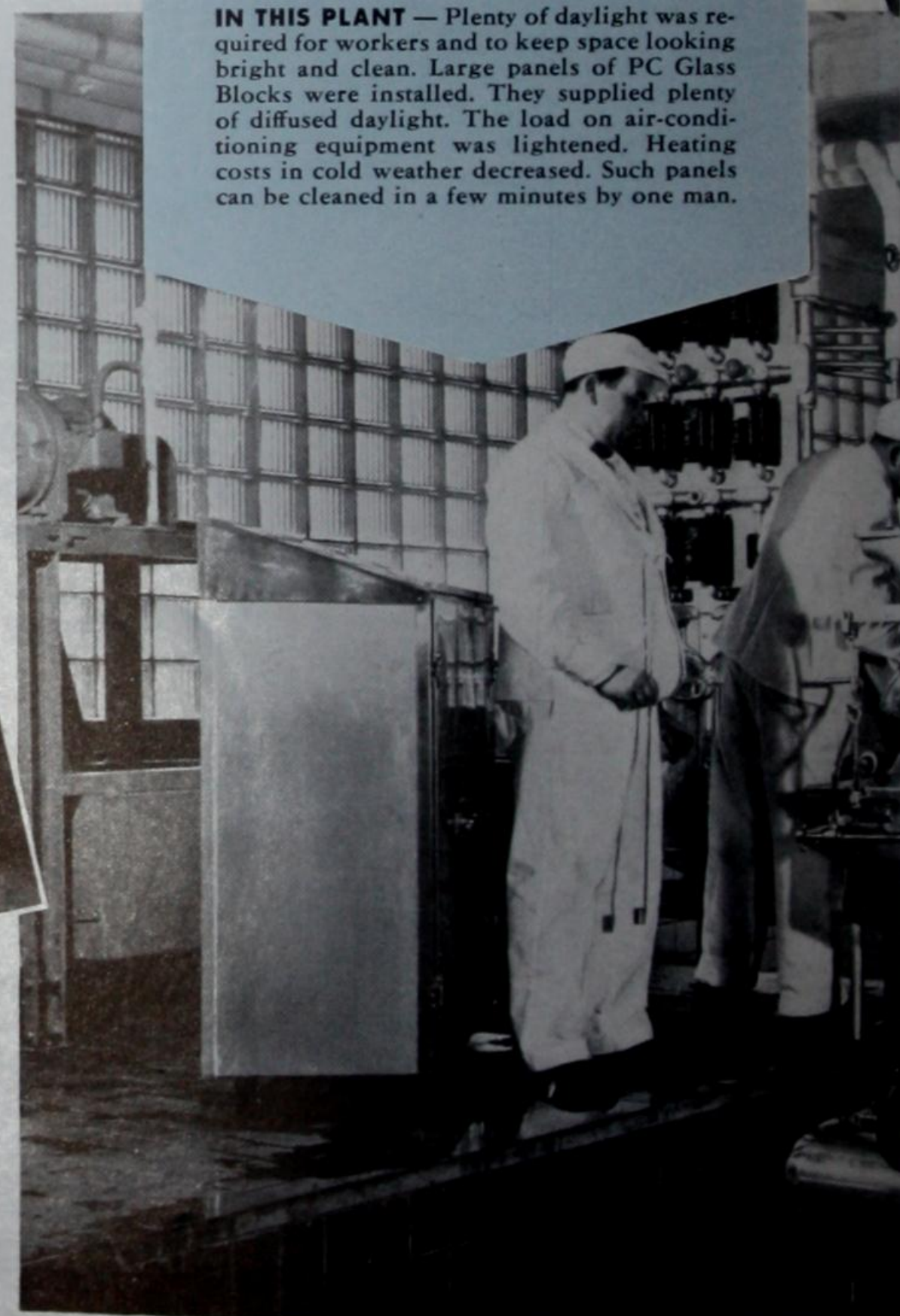


Meat packing houses need light — with constant low temperatures in many parts of the plant. Here the insulation values of glass blocks are vitally important for control of temperatures. Cleanliness plays a big part in the wide acceptance of glass blocks in this industry. In many plants where acid conditions would make frequent replacement of window sash necessary, glass blocks eliminate a costly item.



**DAIRIES** — High humidity in steamy rooms often causes condensation of solutions which would corrode ordinary sash and present a costly maintenance problem. When PC Glass Block panels are used for light areas, condensation is reduced considerably. Because there is no sash to rot or corrode, the maintenance problem is lightened. Cleaning is easy and thorough.

**IN THIS PLANT** — Plenty of daylight was required for workers and to keep space looking bright and clean. Large panels of PC Glass Blocks were installed. They supplied plenty of diffused daylight. The load on air-conditioning equipment was lightened. Heating costs in cold weather decreased. Such panels can be cleaned in a few minutes by one man.







*Glass Blocks*

## AID PRECISION BY REGULATING TEMPERATURE AND HUMIDITY

In many plants rigid control of goods in process and delicate adjustment of precision machinery is essential to maintain product perfection and uniformity. In textile and hosiery mills delicate machinery can easily be thrown out of adjustment by a change in temperature. In machine shops where precision work is done, both tools and materials may be affected by extremes in heat and cold. The insulating properties of PC Glass Blocks are an effective protection against variations in temperature and humidity which retard production. Prevention of excessive heat loss through lighting areas lightens the load on air-conditioning equipment, often effects a reduction in operating costs. Areas near ordinary windows often are not usable for precision work because of frequent outdoor temperature changes. Glass Blocks insulate such areas against sharp variations of temperature, thus increasing usable space.

**HOSIERY MILLS**, with their finely-adjusted machinery, can't take any chance with temperature changes. So, many hosiery plants are air conditioned. To help air-conditioning equipment keep temperatures within close tolerances — and to lessen the load on that equipment, many plants are lighted with big PC Glass Block panels.

**EXTREMELY HIGH TEMPERATURES** are necessary for paper drying, and consequent high humidities make paper mills drip with moisture. This moisture is acid and makes maintenance of ordinary sash both troublesome and costly. PC Glass Blocks eliminate the sash problem completely. Glass Blocks also reduce heat loss, ease the burden on heating equipment, effectively insulate other parts of the mill where high temperatures are not desirable.



Where precision tool work is done, temperature must be kept constant. In this plant Glass Blocks cut heat loss without interfering with the transmission of daylight to working areas.

Storefronts

Art Glass

General Glass  
Catalogues

Miscellaneous



# THIS Dead Air Space HELPS INDUSTRY

Each PC Glass Block contains a sealed-in dead-air space that is an effective heat retardant. As a result, a panel of PC Glass Blocks contains a multitude of small insulating units — each block and the whole panel having a very low coefficient of heat transfer. The insulation of daylighting areas is important to industry. It eliminates much of the wastefulness of ordinary windows, and has a marked effect on manufacturing efficiencies in many plants.

## BETTER TEMPERATURE CONTROL

Whether you want to keep your rooms hot or cold, PC Glass Blocks can help you. They have less than half the heat loss of ordinary windows, with insulation comparable to the best double-glazing. This results in more constant room temperatures, more freedom from the influence of outdoor temperatures, summer and winter.

## LESS CONDENSATION

So effective is the insulation of a PC Glass Block panel, that with an indoor temperature of 70 and a relative humidity of 40%, moisture will not form on the inside of the panel until the outdoor temperature is down around 14 degrees below zero as compared with 33 degrees above zero for ordinary windows. This example shows how effectively glass blocks retard condensation. Even where conditions are severe, troublesome dripping moisture is considerably reduced.

## BETTER HUMIDITY CONTROL

With temperatures held more constant and with less moisture taken from the air by condensation on glass areas, the problem of humidity control is simplified. Where processes are adversely affected by humidity fluctuations, this factor is very important.

## INCREASED USABLE FLOOR AREA

Areas near ordinary windows often are not usable when precision work is being done, because frequent changes in outdoor temperatures so greatly affect room temperatures. PC Glass Blocks not only insulate light-transmission areas against outdoor temperature changes, but also eliminate drafts of cold air. Thus they frequently make the outer floor areas more comfortable for employees and more usable for operation of precision equipment.

## AIDS AIR CONDITIONING

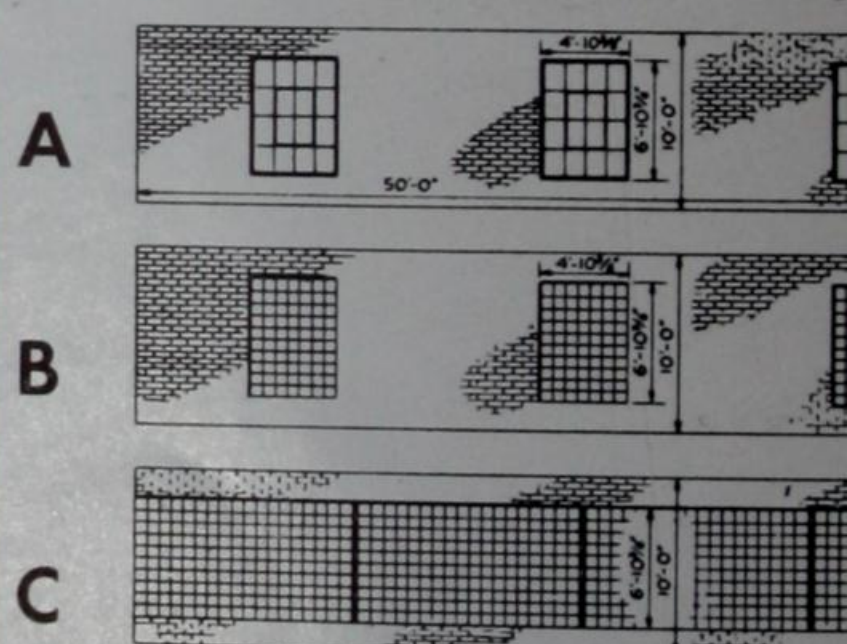
The three chief aims of air conditioning — temperature control, humidity control and cleansing of air are all aided by the use of PC Glass Blocks. The insulation afforded by glass block panels saves money for operators of air-conditioning systems. Heat loss is less in winter — heat gain is less in summer. Humidity conditions are much less likely to be upset by condensation. Solar heat transmission and radiation are reduced. Dirt can't filter in — for each panel is a tightly sealed unit. The result is that less load is thrown on the equipment. It can do a better conditioning job and in some cases savings in size of air-conditioning equipment may be possible.



PC Glass Blocks have the same insulating value as an 8-inch brick wall, practically the same as an 8-inch hollow tile wall — more than twice that of ordinary windows.



## Comparative Heat Loss in Sample



8" brick wall (area 50' x 10') — 3/4" plaster on furred masonry. Temperature inside 70°F. — outside 0°F. Wind at 15 m.p.h.

<b>A</b>	With 100 sq. ft. of single-glazed steel sash in three panels	
	Heat losses —	Through brick . . . . . 8960 Btu
		Through sash . . . . . 7910 Btu
		Through total wall area . . 16870 Btu
<b>B</b>	With 100 sq. ft. of 8" PC Glass Blocks in three panels	
	Heat losses —	Through brick . . . . . 8960 Btu
		Through glass blocks . . . 3430 Btu
		Through total wall area . . 12390 Btu
<b>C</b>	With 340 sq. ft. of 8" PC Glass Blocks —	
	Heat losses —	Through brick . . . . . 3580 Btu
		Through glass blocks . . . 11660 Btu
		Through total wall area . . 15240 Btu

Heat loss through light-transmitting area less than reduction of 26% of total heat loss through the entire wall area.

Heat loss 90% of panel A, but with twice as much light transmission.



## TECHNICAL DATA

## THERMAL INSULATION

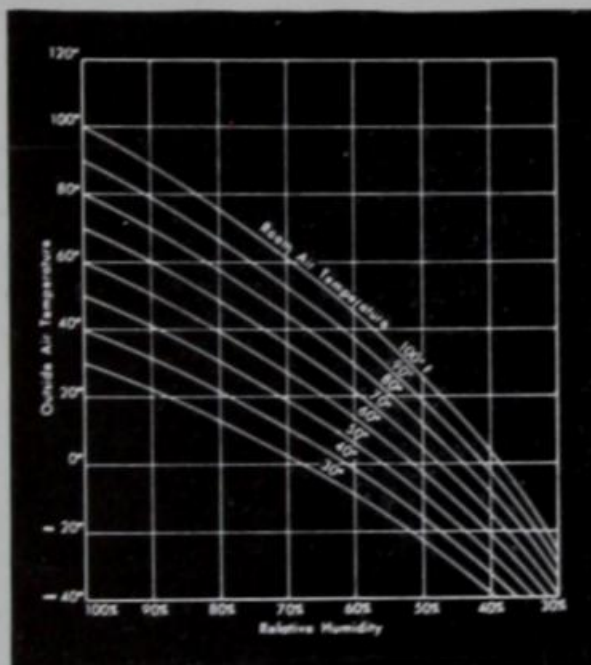
Tests run during the past several years by a number of nationally recognized laboratories have established values for the over-all coefficient of heat transfer "U" as 0.40 to 0.43 for panels of 8-inch block constructed in the recommended manner. In computing heat losses through panels for design purposes, it is recommended that a "U" value of 0.49 be used for all block sizes and face patterns.

## SURFACE CONDENSATION

Due to the high insulating value of PC Glass Blocks, condensation will not start forming on the room side of glass block panels until the outside air has reached a temperature much lower than that necessary to produce condensation on single-glazed windows. The accompanying chart shows at what temperatures condensation will form.

## OUTDOOR TEMPERATURE REQUIRED TO PRODUCE CONDENSATION ON THE ROOM SIDE SURFACE OF PC GLASS BLOCK PANELS

(For example, the chart shows that with inside air at 70° F. and relative humidity at 40%, condensation will not begin to form on the interior surfaces of a glass block panel until an outdoor temperature of -14° is reached. Under similar conditions with single-glazed steel sash, moisture will begin to form when the outdoor temperature reaches +33° F.)



## LIGHT TRANSMISSION

Light transmission through the faces of individual glass blocks has been measured by two somewhat different methods in the absence of any generally accepted standard. Average values for each PC pattern are:

Pattern	% Transmission of Incident Light
Argus.....	80
Argus Parallel Flutes.....	80
Bristol.....	70
Decora.....	80
Reeded-Decora.....	80
Druid.....	80
Essex.....	50
Prism Light-Directing.....	65
Saxon.....	80
Vue.....	85

Additional data on the performance of the Essex and Prism Light-Directing units are given on Page 14.

## SOUND INSULATION

Glass block panels have sound insulation properties equal to or better than other forms of masonry construction having equal weight per unit surface area, and are decidedly superior to single-glazed sash.

Tests give sound reduction factors for standard glass block panels of 37.6 to 42.0 decibels, a value closely approximating that for a 4-inch hollow clay tile wall plastered both sides.

## CRUSHING STRENGTH

Repeated tests made on square wallettes laid up with PC Glass Blocks show a minimum panel compressive strength of 400 to 600 pounds per square inch of gross loaded area.

This crushing strength is well above that of many accepted masonry constructions, and is entirely adequate to resist safely the forces created by conditions within the glass block panels themselves.

However, glass block construction should never be used for loadbearing walls or panels. Adequate provision must be made for the support of construction above glass block panels, and expansion joints must be provided at head and jams of all panels in exterior walls.

## BOND STRENGTH

PC Glass Blocks have a special grit-bearing, moisture-and-alkaline-resisting, plastic coating on all mortar edges. This insures a complete and permanent bond between the glass and the cement mortar and provides a panel construction having a high degree of wind resistance and watertightness.

## WIND RESISTANCE

From wind pressure tests on PC Glass Block Panels ranging in area from 50 sq. ft. (5'x10') to 256 sq. ft. (16'x16'), it has been found that any panel properly supported at its edges and within the area limits recommended will withstand a wind load of 20 pounds per sq. ft. with a safety factor of at least 2.7.

## SOLAR HEAT GAIN

The use of glass blocks for light-transmitting areas results in a marked reduction in the total solar heat gain as compared with ordinary windows. This factor is of considerable advantage in buildings that are properly air conditioned, but does not eliminate the need for adequate ventilation or shading in non-air-conditioned rooms.

Based upon extensive tests, suggested figures for design computations are a maximum hourly rate of 41 B.T.U. and maximum daily rate of 250 B.T.U. total heat gain per square foot of glass block panel on South exposure, 40 degrees North Latitude for August 1.

More complete data on solar radiation appear in the current Guide of the American Society of Heating and Ventilating Engineers.

## WEATHER RESISTANCE

Under all sorts of weather conditions, PC Glass Block construction has proved its durability. Tests of panels subjected to repeated cycles of heating, water spray and freezing show no sign of cracking or other structural deterioration, although temperatures well above and below those encountered in any exposure have been regularly used.

## WATER-TIGHTNESS

Experience, both in the laboratory, where some 4,000 sq. ft. of panels 8'x10' in size have been tested, and also in the field where records of a number of jobs are available, conclusively indicates that properly constructed panels of PC Glass Blocks will be free from leakage. After long, driving rain storms, the most that has been observed is a slight darkening of the mortar joints.

## ESTIMATING DATA

(For 100 sq. ft. of panel laid with 1/4-in. visible mortar joints)

Size of Block.....	6"	8"	12"
Number of Blocks..	400	225	100
Weight of Panel....	2000 lbs.	1800 lbs.	1900 lbs.
Volume of Mortar..	4.3 c.f.	3.2 c.f.	2.2 c.f.



# GLASS BLOCKS

## FACTS ABOUT THE PRISM LIGHT-DIRECTING GLASS BLOCKS

Often desirable to provide a means of getting daylight as far as possible into a room and thus provide daylighting for work-areas which are located far from outside walls. The PC Prism Light-Directing Glass Block is designed for this purpose. This block controls the direction of light transmitted by the block. Because the transmitted light is bent downward, a more uniform distribution of interior illumination is possible when used with reflecting ceiling. Objectionable brightness and glare are reduced when viewed from the horizontal or below. The result is a more even distribution of daylight, with a reduction in the intensity of direct sunlight falling on working areas near outside walls. This control of transmitted light is accomplished by means of horizontal prisms on the two inside faces. Incident sunlight is so refracted that the greater part of the transmitted light is directed toward the ceiling, with a minimum directed downward. The prism construction is all on the inside, and thus the light-directing surfaces are protected from damage or dirt. Light-Directing Blocks should be laid only above eye level (5'6" to 6' above the floor), so that the light will be directed away from the eyes of room occupants. Correct control of light is possible only when blocks are set in proper position. Blocks are marked to indicate correct setting.

### Light Transmission and Distribution

The PC Prism Light-Directing unit has an unusually high light-transmission factor for this type of glass — about 80% that of the Argus and other conventional patterns. The diagrams at the right illustrate the performance of the prisms, and show a typical illumination curve. Note the high foot-candle readings well back in the room, and the low ratio between the maximum and minimum — always a desirable feature in lighting.

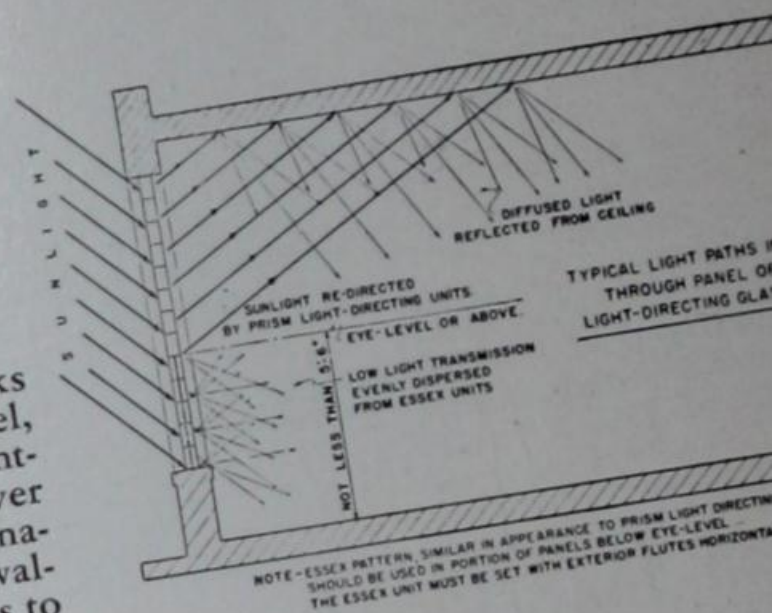
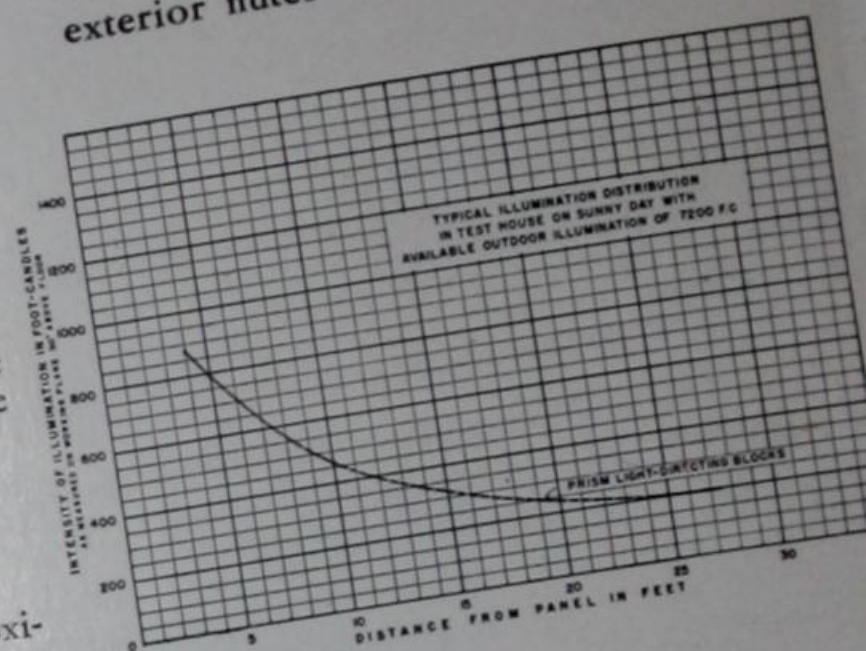
### Solar Heat Transmission

Tests show that the total heat gain is approximately 85% that of the standard Argus Glass Block and about half that of single-glazed sash. The benefit to room occupants is even more pronounced, however, since they suffer no bodily discomfort as a result of the direct rays of the sun.

### Use in Combination with the Essex Block

Where panels containing Prism Blocks would normally extend below eye-level, it is recommended that the complementary ESSEX Block be used in the lower portion of the panel. With this combination, advantage is taken of the most valuable qualities of each of these blocks to provide best lighting conditions. The

Essex Block is similar in appearance to the Prism Unit. It must be installed with exterior flutes in a horizontal position.



## FACTS ABOUT THE ESSEX GLASS BLOCK

The use of large glass areas for daylighting, while effective for cloudy days, frequently presents a problem of light distribution — especially in direct sunlight. Reduction of daylight intensity by the use of awnings or shades has frequently resulted in the impairment of the efficiency of the natural illumination. The diffusing qualities of standard glass block patterns have partially solved this problem, but their use in extensive areas presents the same problem as single glazing — though to a lesser degree.

The solution is the use of ESSEX pattern Glass Blocks. They transmit a relatively low amount of incident light, evenly dispersed, and provide best lighting conditions even when large glass areas are required for adequate illumination of large floor areas. Correct control of light is possible only when blocks are set with exterior flutes in a horizontal position.

### Light Transmission and Distribution

Light transmission of the ESSEX Glass Block is of an evenly dispersed character and is approximately 60% of the Argus and other conventional patterns.

### Solar Heat Transmission

Tests show that the total solar heat gain through glass block panels is made up of two factors — radiant heat directly transmitted into the room, and heat first absorbed by the panel itself and then partly re-radiated and partly conducted into the room. The interior vertical prisms and exterior spreading flutes of the ESSEX Block account for the very low figure for total heat gain — about 60% that of the Argus or other conventional patterns, or some 35% that of single glazed sash. This reduction of solar heat will appreciably reduce cooling loads in air-conditioned rooms, but

will not eliminate the need for ventilation in non-air-conditioned on sun exposures.

### Where to Use Essex Glass Blocks

Generally — wherever it is of advantage to take advantage of the insulating qualities of transmitting areas through glass blocks, and at the same time provide a relatively low amount of light, evenly dispersed to provide best lighting conditions. The following serve as a guide to the use of Essex Glass Blocks:

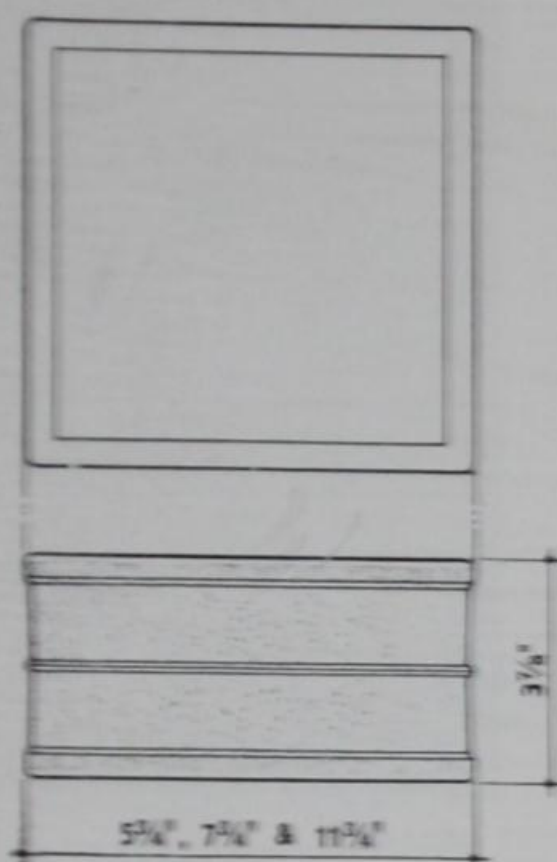
1. In large areas on South, and West exposures where low light transmission and low solar heat gain are required. Conditions are none of Prism Light-Directing.
2. Below eye-level, where low light transmission with Prism Light-Directing on sun exposure is required.



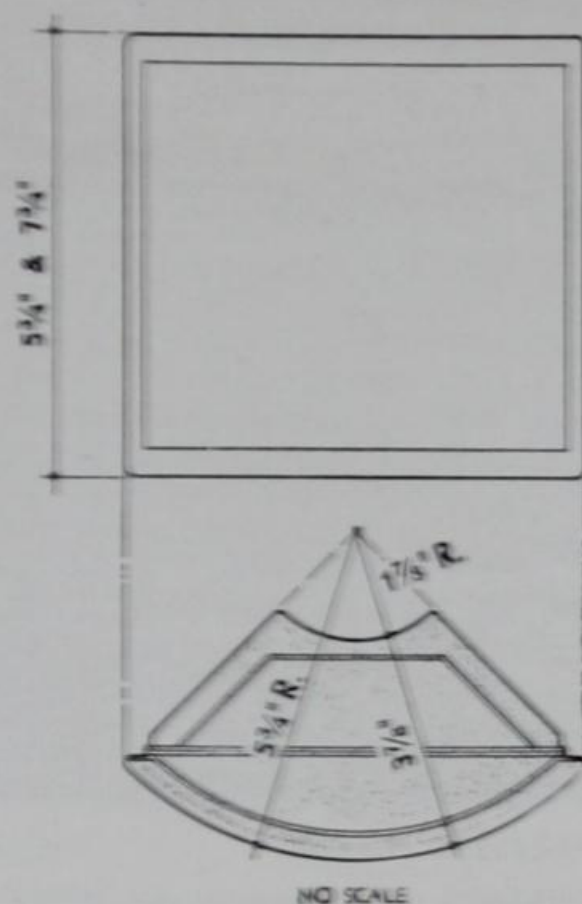
# PC Glass Blocks

## SIZES AND SHAPES AVAILABLE

### SQUARE BLOCKS

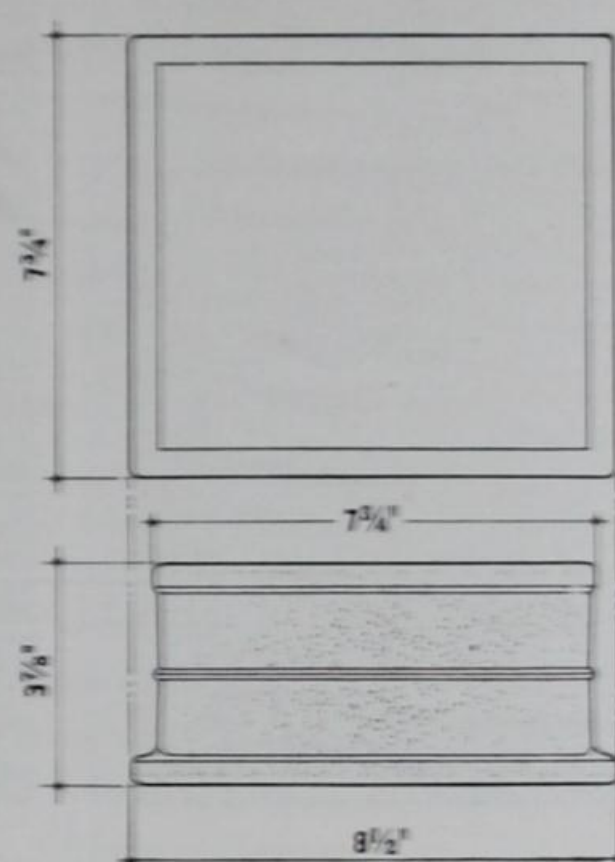


### CORNER BLOCKS



NO SCALE

### RADIAL BLOCKS



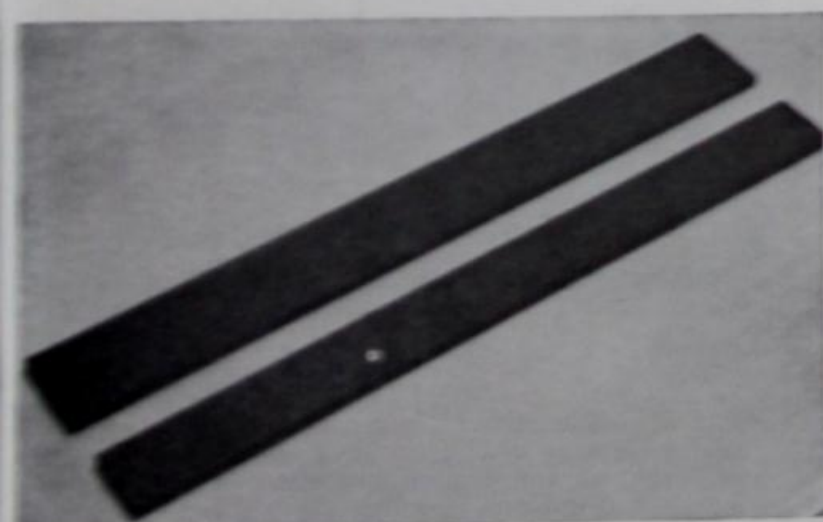
**PITTSBURGH NV-3389 WATERPROOFING COMPOUND** — To be added to the mortar to conform with PC specifications. Use one (1) quart per bag of cement.  
Available in one-quart, one-gallon, and five-gallon containers.



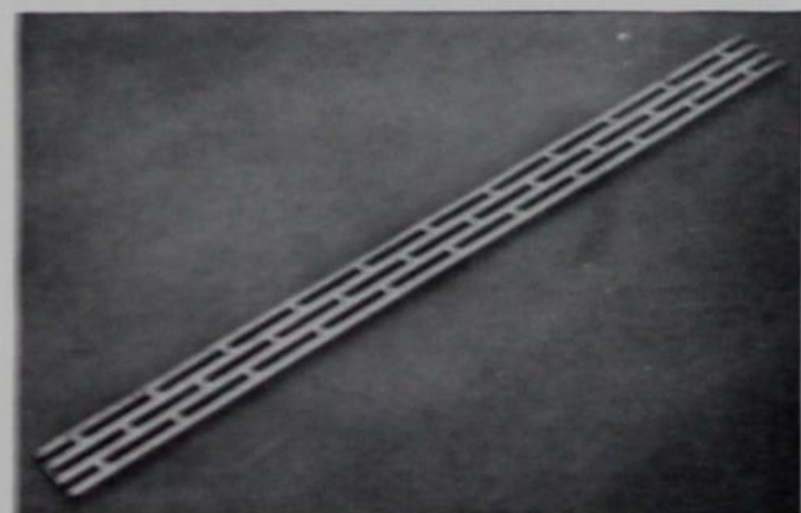
These PC accessory materials can be obtained from all suppliers of PC Glass Blocks



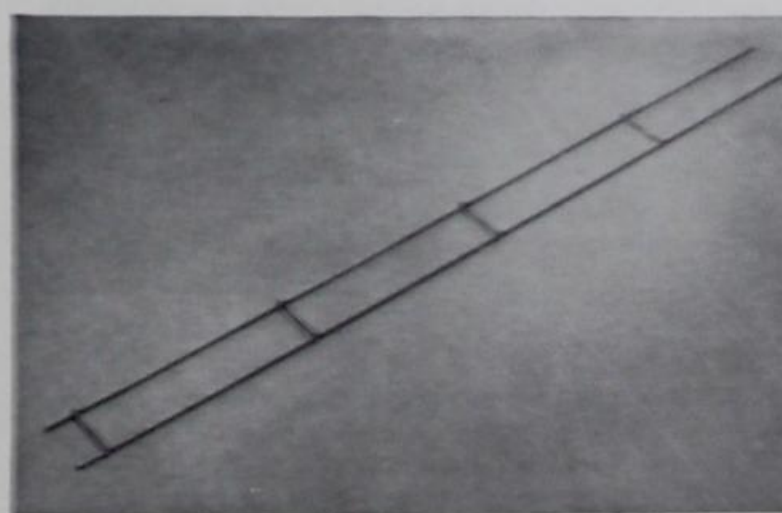
**PC ASPHALT EMULSION** — To be used on all sills to form a waterproof joint. Also used to adhere expansion strips to side and head jambs before installing glass blocks. See specifications for proper application. Available in one-quart, one-gallon, and five-gallon containers.



**PC EXPANSION STRIPS** — To be used in expansion spaces at side and head jambs installed in accordance with PC specifications. Strips are supplied with heavy paper on one face. The paper surface is to be installed facing the block panel.  
Available in the following sizes:  
4" x 1/2" x 16" (For use in chase construction)  
3" x 1/2" x 16" (For use in wall anchors construction)



**PC WALL ANCHORS** — To be used for supporting panels up to 100 sq. ft. in area where permitted by building code requirements. Spaced and installed in accordance with PC specifications. Wall Anchors are No. 20 gauge perforated steel galvanized after fabrication.  
Available in 2'-0" lengths, 1 3/4" wide.



**PC WALL TIES** — To be used in horizontal joints of glass block panels, spaced and installed in accordance with PC specifications. Wall Ties are formed of two No. 9 galvanized wires spaced 2" apart with No. 14 galvanized cross wires welded every 8".  
Available in 8' lengths.

Storefronts

Art Glass

General Glass

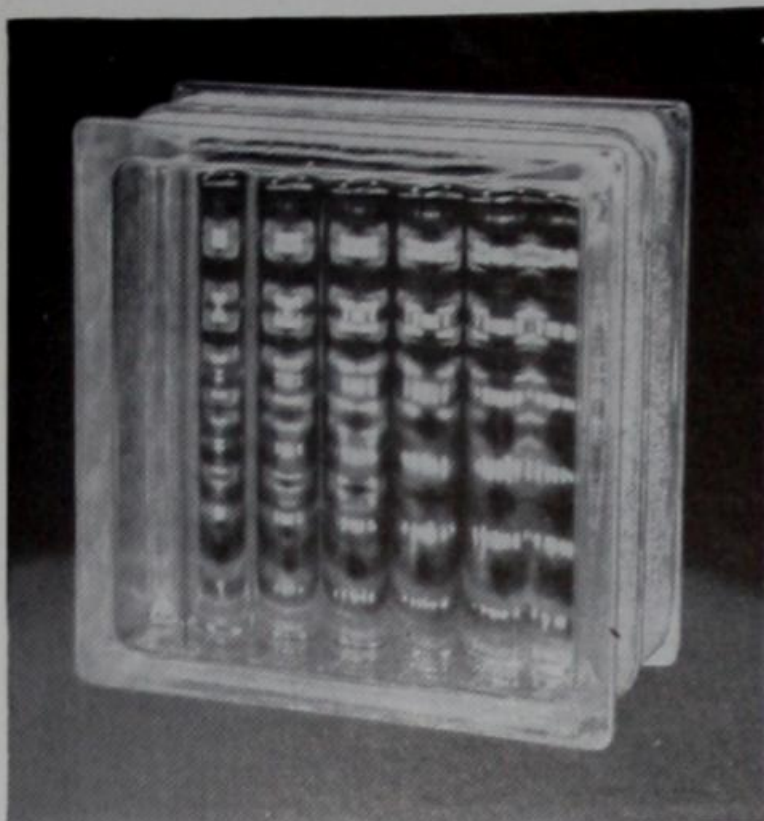
Miscellaneous



# PC Glass Blocks

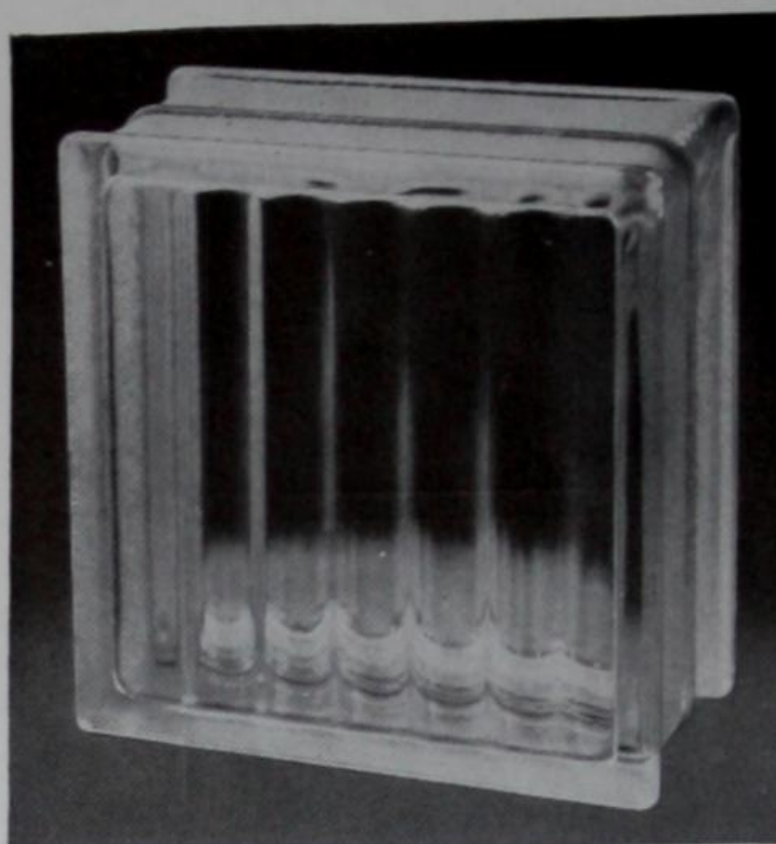
AVAILABLE IN

For light distribution data for all blocks, see page 13



## ARGUS

1. A conventional pattern designed for general use, both decorative and utilitarian.
2. High light transmission, good light diffusion.
3. Can be laid with flutes vertical or horizontal on room side with equally pleasing and efficient results. Caution: When used in combination with corner or radial blocks, if pattern match is desired, the standard blocks must be laid with flutes horizontal on room side.
4. Smooth outside faces permit maximum cleanability.
5. Pattern description: Smooth outside faces, interior flutes identical, assembled at right angles.



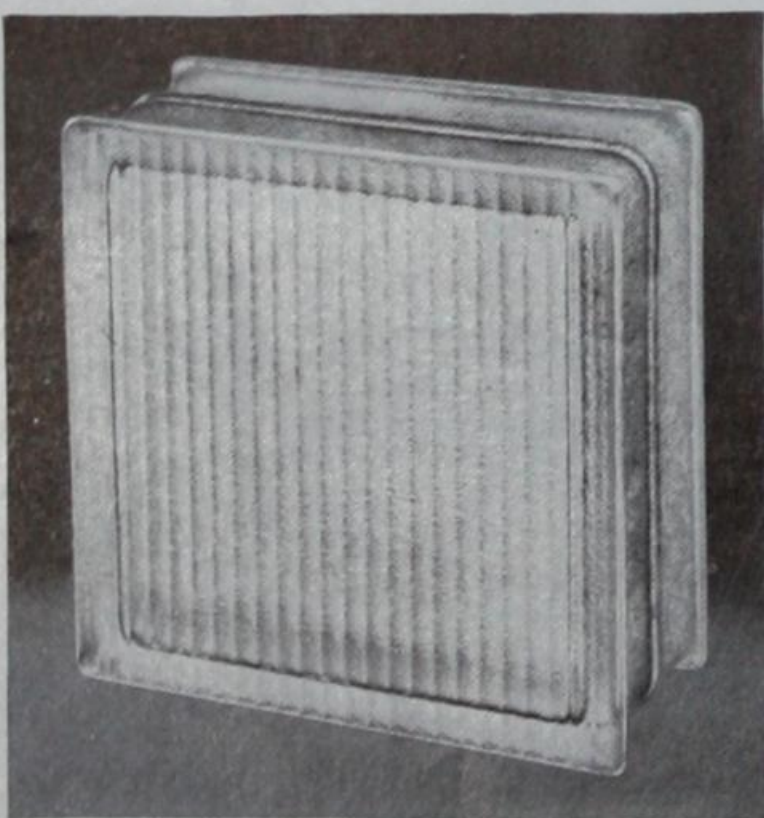
## ARGUS PARALLEL FLUTES

1. A conventional pattern designed for general use, both decorative and utilitarian.
2. High light transmission, good light diffusion.
3. Can be laid with flutes vertical or horizontal with equally pleasing and efficient results. Caution: When used in combination with corner or radial blocks, pattern match can be obtained on only one side of panel.
4. Smooth outside faces permit maximum cleanability.
5. Pattern description: Smooth outside faces, interior flutes identical and parallel.



## DECORA

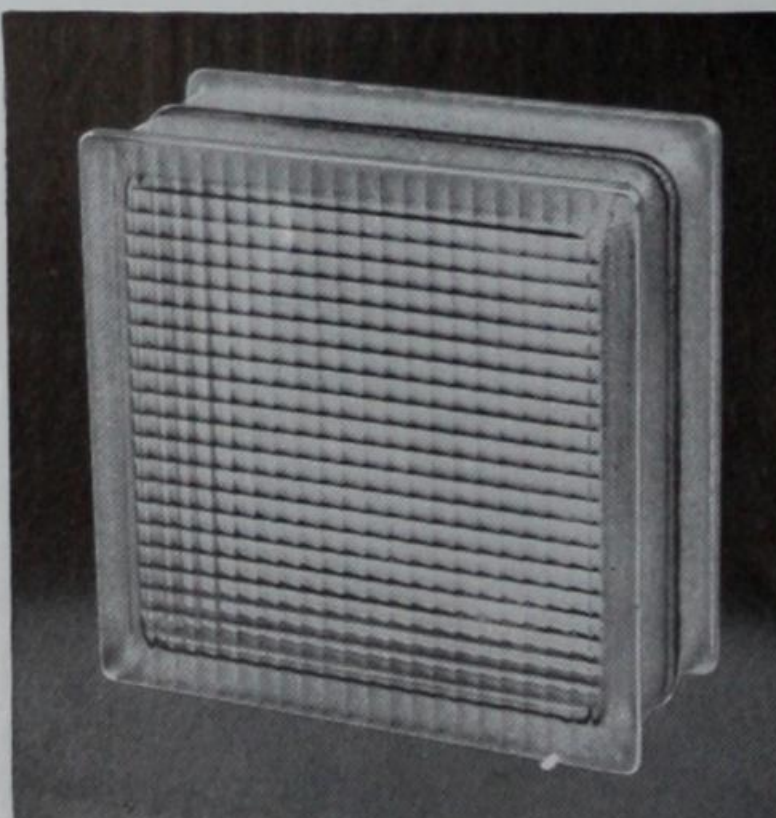
1. A decorative pattern ideally suited to harmonize with both modern and conventional design.
2. High light transmission with irregular diffusion and high translucency.
3. Asymmetric design permits laying without regard to pattern.
4. Smooth outside faces insure maximum cleanability.
5. Pattern description: Smooth outside faces, asymmetric design on both interior faces.



## BRISTOL

1. Designed to provide softer, more diffused light.
2. Should be laid with exterior flutes vertical.
3. Cleanability maintained by the smooth exterior flutes and lightly etched border.
4. Pattern description: Narrow vertical flutes and lightly etched border on both outside faces, and flat etched inside faces.

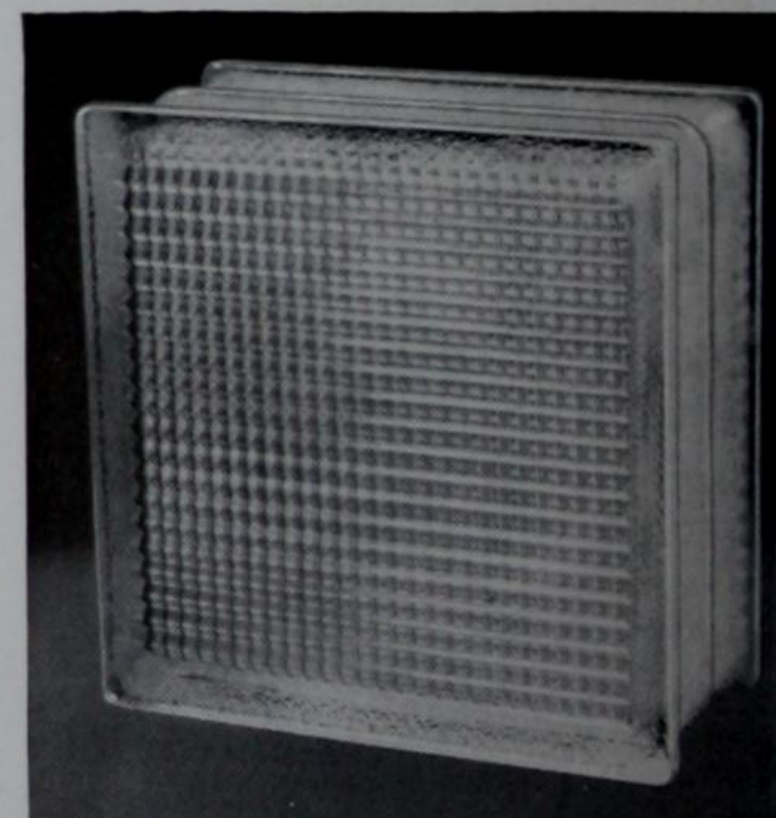
NOTE: This block is supplied in the 7 3/4" sizes only.



## DRUID

1. Designed to provide high light transmission and closely match the Prism Light-Directing unit. For use on elevations without sun exposure when Prism Light-Directing units are used on adjacent sun exposure elevations.
2. Must be laid with exterior flutes vertical.
3. Cleanability is maintained by the smooth exterior flutes and lightly etched border.
4. Pattern description: Narrow vertical flutes and lightly etched border on both outside faces, horizontal flutes on both inside faces. Closely matches appearance of Prism Light-Directing unit.

NOTE: This block is supplied in the 7 3/4" sizes only.



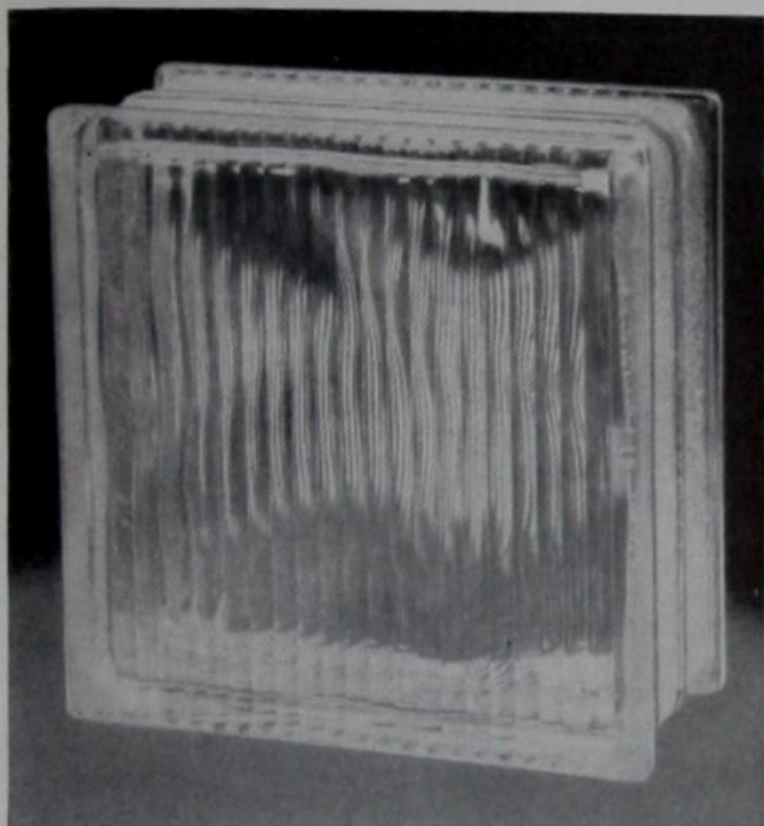
## ESSEX

1. Specially designed for low light transmission. For use below eye-level in panels containing Prism Light-Directing Blocks and on elevations subjected to severe exposure to direct sunlight where Prism Light-Directing Blocks are not adaptable.
2. Must be laid with exterior flutes horizontal.
3. Pattern description: Horizontal spreading flutes and lightly etched borders on both exterior faces, vertical Prisms on both interior faces.

NOTE: This block is supplied in the 7 3/4" sizes only.

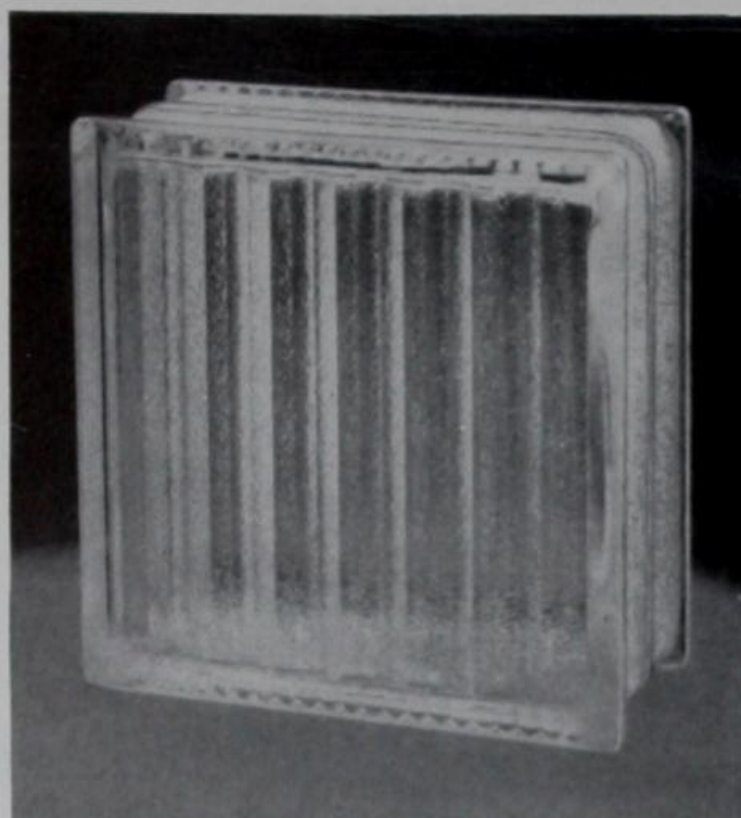


# A WIDE SELECTION OF SIZES AND PATTERNS



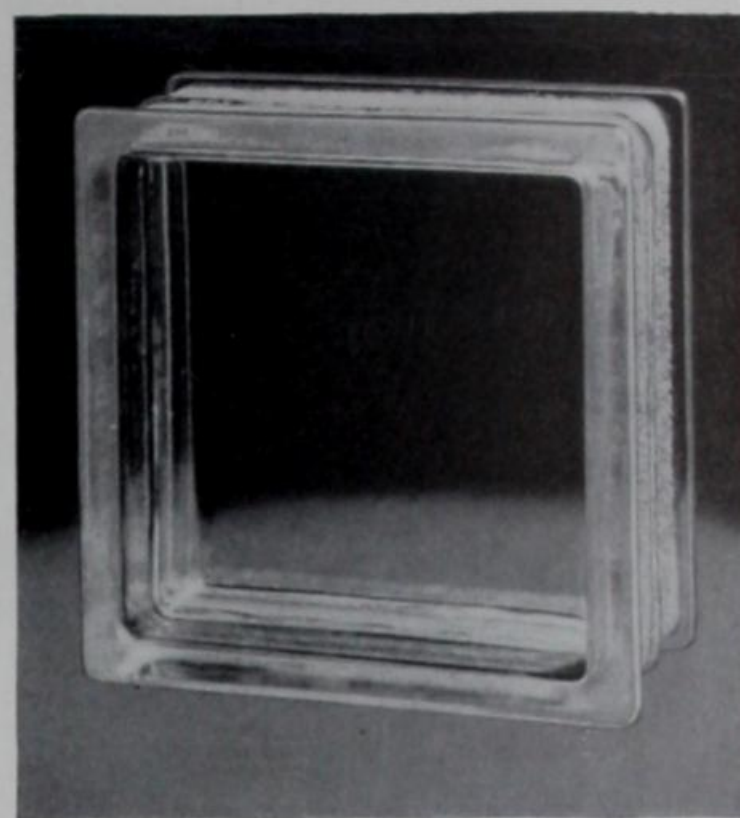
## REED-DECORA

1. A modified Decora design to increase irregular pattern effects.
2. High light transmission with good diffusion and superior obscurity.
3. Should be laid with exterior reeds vertical.
4. Cleanability is maintained by the smoothly rounded exterior reeds.
5. Pattern description: Narrow parallel reeds on both exterior faces, asymmetric design on both interior faces.



## SAXON

1. A pleasing uniform pattern designed for even light diffusion and brightness reduction, but with good light transmission.
2. Interior etched surfaces with exterior reeds produce maximum obscurity.
3. Should be laid with exterior reeds vertical.
4. Cleanability is maintained by the smoothly rounded exterior reeds.
5. Pattern description: Narrow parallel reeds on both exterior faces, parallel to wide flutes on both interior faces. Both interior faces are etched.

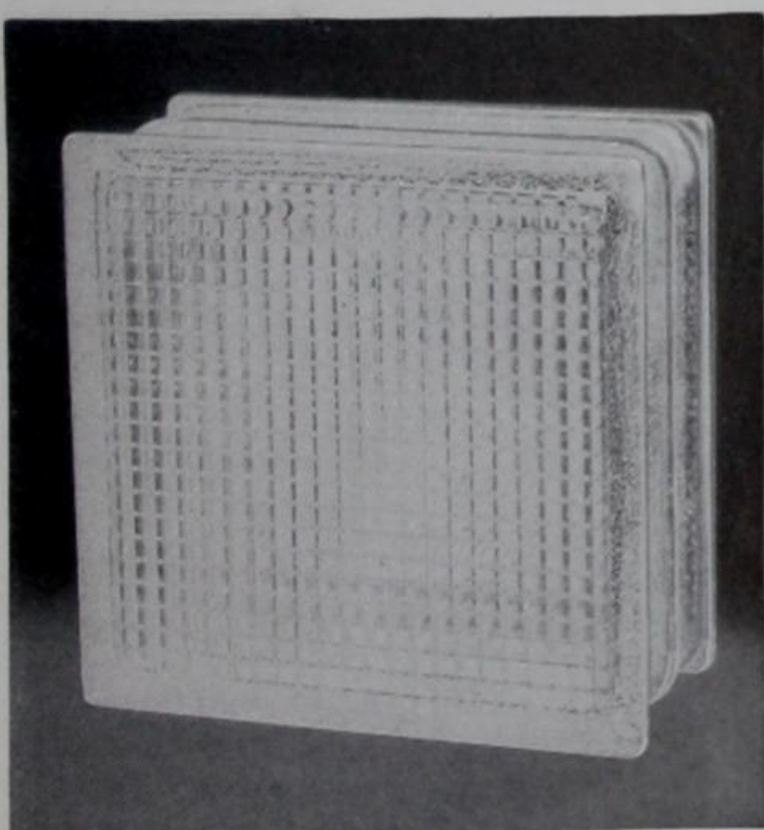


## VUE

1. A pattern employing clear glass surfaces to permit sufficient general vision of large objects or movements beyond the panel to prevent the "shut-in" feeling. However, visibility of sharp details is not possible under most conditions.
2. High light transmission.
3. Cleanability is assured by smooth exterior surfaces.
4. Pattern description: Clear, smooth interior and exterior surfaces.

NOTE: This block is supplied in the 7 3/4" sizes only.

(Subject to change without notice)



## PRISM LIGHT-DIRECTING

1. Specially designed to control the direction of sunlight transmitted by the block, and under proper conditions, to provide improved natural illumination.

2. By means of unlike prisms on the two inside faces, the greater part of the transmitted light is directed upward — away from the direct vision or glare zone — to the ceiling where it may be reflected downward to provide indirect "daylighting."

3. Can be set in one position only — block is marked to indicate correct setting. Must not be used below eye level. For lower portions of panels below eye level use Essex Blocks.

4. Smooth vertical exterior flutes and lightly etched border insure easy cleaning.

5. Pattern description: Narrow vertical flutes and etched border on both outside faces, horizontal prisms on both inside faces.

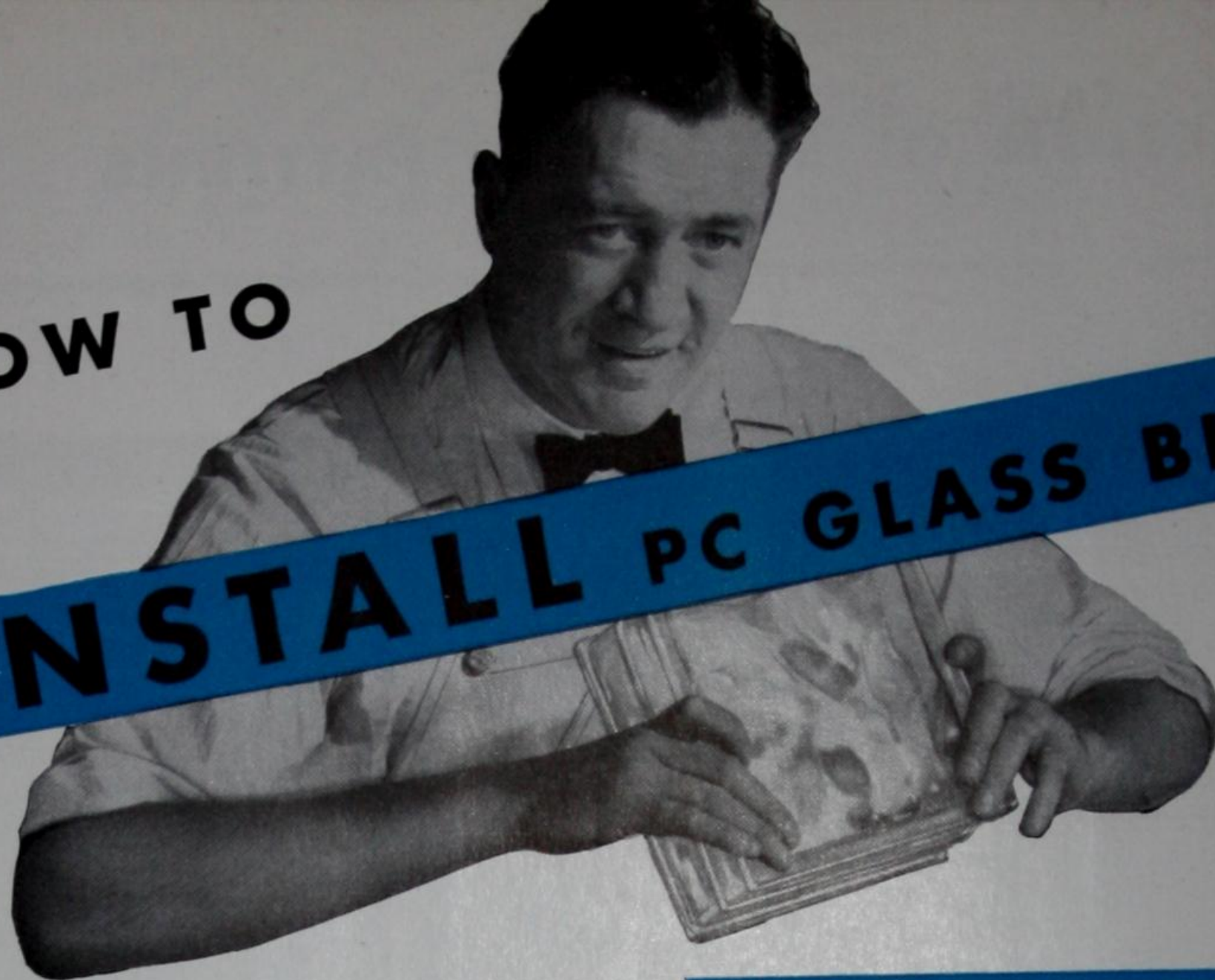
NOTE: This block is supplied in 7 3/4" size only.

PATTERNS	SIZES AND SHAPES AVAILABLE					
	5 3/4" Square	7 3/4" Square	11 3/4" Square	5 3/4" Corner	7 3/4" Corner	7 3/4" Radial
Argus	•	•	•	•	•	•
Argus Parallel Flutes	•	•	•			
Bristol		•			•	•
Decora	•	•	•	•	•	•
Druid		•			•	•
Essex		•				
Prism Light-Directing		•				
Reeded-Decora	•	•	•	•	•	•
Saxon	•	•	•	•	•	•
Vue		•				•

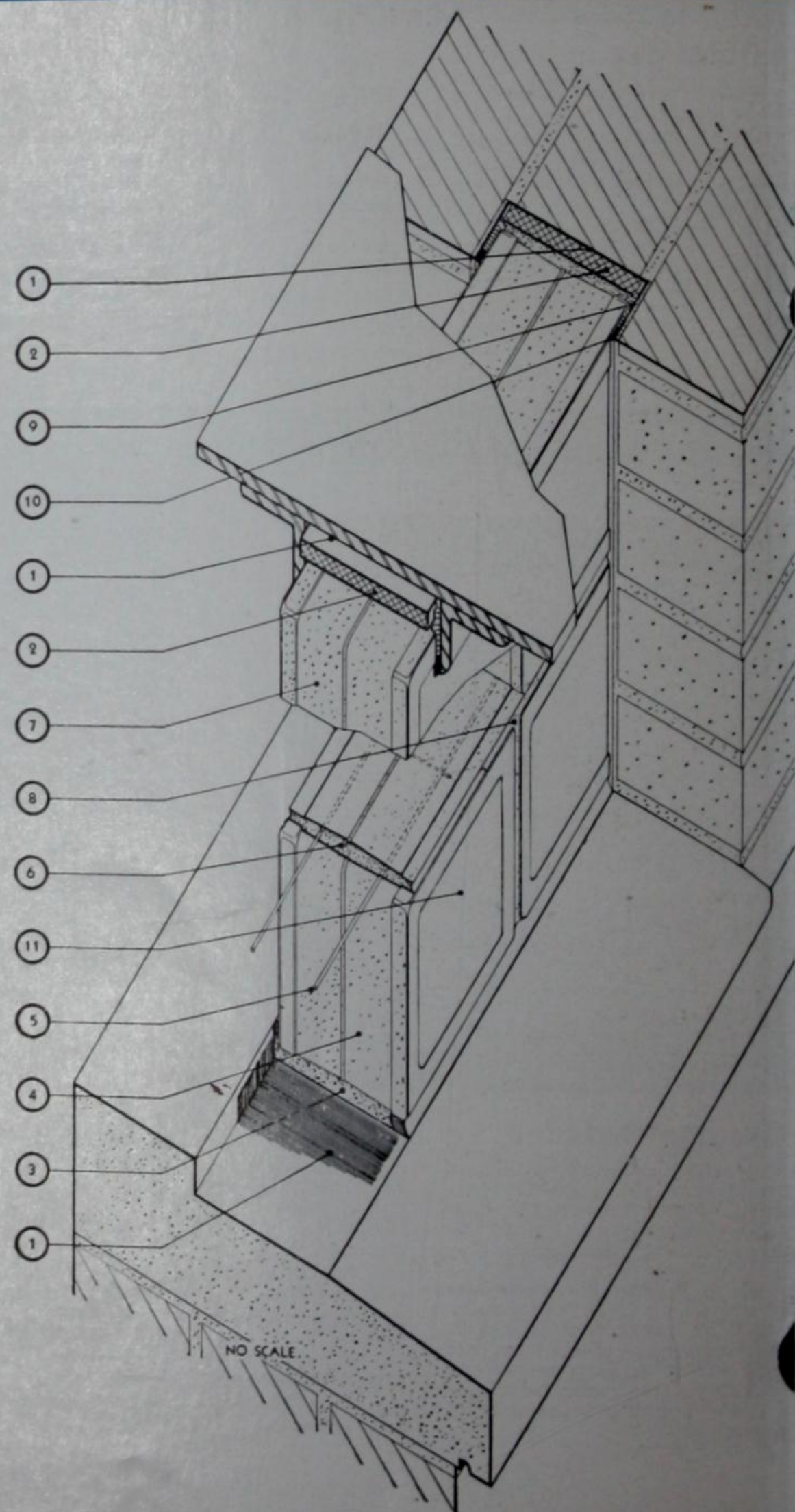


# HOW TO

# INSTALL PC GLASS BLOCKS



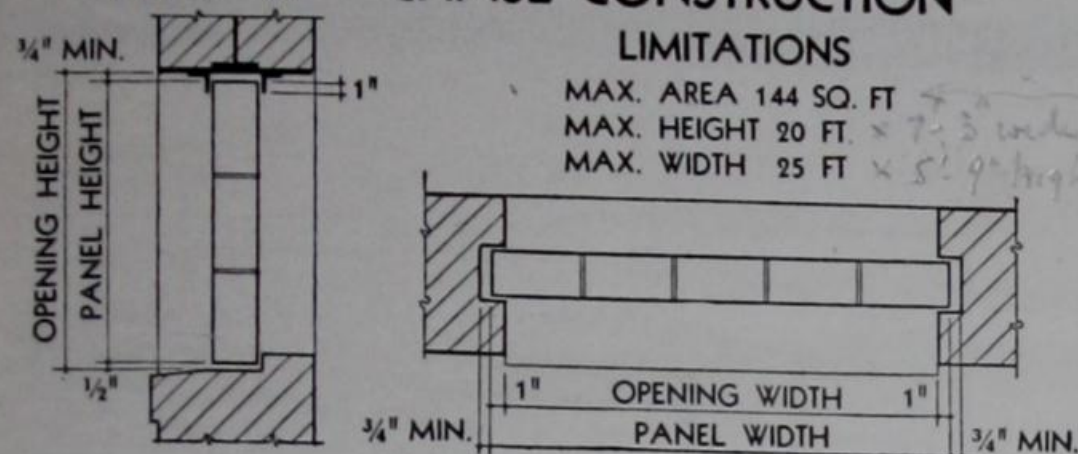
1. Mop entire perimeter of opening with heavy coat of asphalt emulsion.
2. Adhere PC Expansion Strip to jambs and head. Make certain expansion strip extends to sill.
3. Place full mortar bed at sill — do not furrow.
4. Set lower course of block. All vertical and horizontal mortar joints must be full and not furrowed. Steel tools must not be used to tap blocks into final position.
5. Install PC Wall Ties in horizontal joints where required as follows:
  - (a) Place lower half of mortar bed. Do not furrow.
  - (b) Place wall tie centered in joint.
  - (c) Cover wall tie with upper half of mortar bed and trowel smooth. Do not furrow.
  - (d) Wall ties must run from end to end of panels and where used continuously must lap 6". Wall ties must not bridge expansion joints.
6. Place full mortar bed for joints not requiring wall ties — do not furrow.
7. Follow instructions 3, 4 and 6 for setting succeeding courses of blocks.
8. Strike joints smoothly as shown while mortar is still plastic and before final set. At this time rake out all joints requiring calking to a depth equal to the thickness of joint. Remove surplus mortar from faces of glass blocks and wipe dry.
9. After final mortar set, pack oakum (as specified) tightly into jamb and head construction as shown.
10. Calk interior and exterior perimeter of panel as shown with calking compound as specified.
11. Final cleaning of glass block faces shall not be done until after final mortar set.



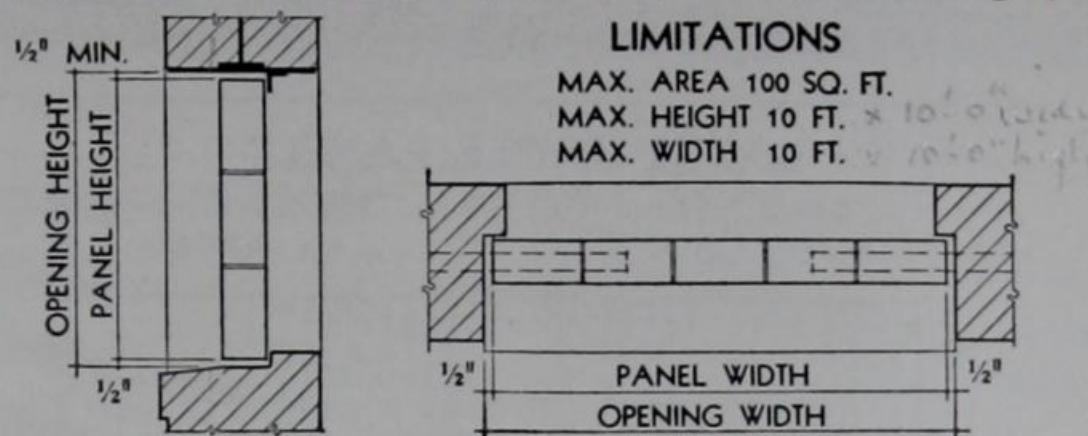


## LAYOUT TABLES FOR PC GLASS BLOCK PANELS

### TYPE "A"—CHASE CONSTRUCTION



### TYPE "B"—WALL ANCHOR CONSTRUCTION



5 <sup>3</sup> / <sub>4</sub> " SQUARE BLOCKS 1 <sup>1</sup> / <sub>4</sub> " MORTAR JOINTS					7 <sup>3</sup> / <sub>4</sub> " SQUARE BLOCKS 1 <sup>1</sup> / <sub>4</sub> " MORTAR JOINTS					11 <sup>3</sup> / <sub>4</sub> " SQUARE BLOCKS 1 <sup>1</sup> / <sub>4</sub> " MORTAR JOINTS				
NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"	NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"	NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"
		MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING HEIGHT & WIDTH			MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING HEIGHT & WIDTH			MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING HEIGHT & WIDTH
1	5 <sup>3</sup> / <sub>4</sub> "	3 <sup>3</sup> / <sub>4</sub> "	7"	6 <sup>3</sup> / <sub>4</sub> "	1	7 <sup>3</sup> / <sub>4</sub> "	5 <sup>3</sup> / <sub>4</sub> "	9"	8 <sup>3</sup> / <sub>4</sub> "	1	11 <sup>3</sup> / <sub>4</sub> "	9 <sup>3</sup> / <sub>4</sub> "	1'-1"	1'-0 <sup>3</sup> / <sub>4</sub> "
2	11 <sup>3</sup> / <sub>4</sub> "	9 <sup>3</sup> / <sub>4</sub> "	1'-1"	1'-0 <sup>3</sup> / <sub>4</sub> "	2	1'-3 <sup>3</sup> / <sub>4</sub> "	1'-1 <sup>3</sup> / <sub>4</sub> "	1'-5"	1'-4 <sup>3</sup> / <sub>4</sub> "	2	1'-11 <sup>3</sup> / <sub>4</sub> "	1'-9 <sup>3</sup> / <sub>4</sub> "	2'-1"	2'-0 <sup>3</sup> / <sub>4</sub> "
3	1'-5 <sup>3</sup> / <sub>4</sub> "	1'-3 <sup>3</sup> / <sub>4</sub> "	1'-7"	1'-6 <sup>3</sup> / <sub>4</sub> "	3	1'-11 <sup>3</sup> / <sub>4</sub> "	1'-9 <sup>3</sup> / <sub>4</sub> "	2'-1"	2'-0 <sup>3</sup> / <sub>4</sub> "	3	2'-11 <sup>3</sup> / <sub>4</sub> "	2'-9 <sup>3</sup> / <sub>4</sub> "	3'-1"	3'-0 <sup>3</sup> / <sub>4</sub> "
4	1'-11 <sup>3</sup> / <sub>4</sub> "	1'-9 <sup>3</sup> / <sub>4</sub> "	2'-1"	2'-0 <sup>3</sup> / <sub>4</sub> "	4	2'-7 <sup>3</sup> / <sub>4</sub> "	2'-5 <sup>3</sup> / <sub>4</sub> "	2'-9"	2'-8 <sup>3</sup> / <sub>4</sub> "	4	3'-11 <sup>3</sup> / <sub>4</sub> "	3'-9 <sup>3</sup> / <sub>4</sub> "	4'-1"	4'-0 <sup>3</sup> / <sub>4</sub> "
5	2'-5 <sup>3</sup> / <sub>4</sub> "	2'-3 <sup>3</sup> / <sub>4</sub> "	2'-7"	2'-6 <sup>3</sup> / <sub>4</sub> "	5	3'-3 <sup>3</sup> / <sub>4</sub> "	3'-1 <sup>3</sup> / <sub>4</sub> "	3'-5"	3'-4 <sup>3</sup> / <sub>4</sub> "	5	4'-11 <sup>3</sup> / <sub>4</sub> "	4'-9 <sup>3</sup> / <sub>4</sub> "	5'-1"	5'-0 <sup>3</sup> / <sub>4</sub> "
6	2'-11 <sup>3</sup> / <sub>4</sub> "	2'-9 <sup>3</sup> / <sub>4</sub> "	3'-1"	3'-0 <sup>3</sup> / <sub>4</sub> "	6	3'-11 <sup>3</sup> / <sub>4</sub> "	3'-9 <sup>3</sup> / <sub>4</sub> "	4'-1"	4'-0 <sup>3</sup> / <sub>4</sub> "	6	5'-11 <sup>3</sup> / <sub>4</sub> "	5'-9 <sup>3</sup> / <sub>4</sub> "	6'-1"	6'-0 <sup>3</sup> / <sub>4</sub> "
7	3'-5 <sup>3</sup> / <sub>4</sub> "	3'-3 <sup>3</sup> / <sub>4</sub> "	3'-7"	3'-6 <sup>3</sup> / <sub>4</sub> "	7	4'-7 <sup>3</sup> / <sub>4</sub> "	4'-5 <sup>3</sup> / <sub>4</sub> "	4'-9"	4'-8 <sup>3</sup> / <sub>4</sub> "	7	6'-11 <sup>3</sup> / <sub>4</sub> "	6'-9 <sup>3</sup> / <sub>4</sub> "	7'-1"	7'-0 <sup>3</sup> / <sub>4</sub> "
8	3'-11 <sup>3</sup> / <sub>4</sub> "	3'-9 <sup>3</sup> / <sub>4</sub> "	4'-1"	4'-0 <sup>3</sup> / <sub>4</sub> "	8	5'-3 <sup>3</sup> / <sub>4</sub> "	5'-1 <sup>3</sup> / <sub>4</sub> "	5'-5"	5'-4 <sup>3</sup> / <sub>4</sub> "	8	7'-11 <sup>3</sup> / <sub>4</sub> "	7'-9 <sup>3</sup> / <sub>4</sub> "	8'-1"	8'-0 <sup>3</sup> / <sub>4</sub> "
9	4'-5 <sup>3</sup> / <sub>4</sub> "	4'-3 <sup>3</sup> / <sub>4</sub> "	4'-7"	4'-6 <sup>3</sup> / <sub>4</sub> "	9	5'-11 <sup>3</sup> / <sub>4</sub> "	5'-9 <sup>3</sup> / <sub>4</sub> "	6'-1"	6'-0 <sup>3</sup> / <sub>4</sub> "	9	8'-11 <sup>3</sup> / <sub>4</sub> "	8'-9 <sup>3</sup> / <sub>4</sub> "	9'-1"	9'-0 <sup>3</sup> / <sub>4</sub> "
10	4'-11 <sup>3</sup> / <sub>4</sub> "	4'-9 <sup>3</sup> / <sub>4</sub> "	5'-1"	5'-0 <sup>3</sup> / <sub>4</sub> "	10	6'-7 <sup>3</sup> / <sub>4</sub> "	6'-5 <sup>3</sup> / <sub>4</sub> "	6'-9"	6'-8 <sup>3</sup> / <sub>4</sub> "	10	9'-11 <sup>3</sup> / <sub>4</sub> "	9'-9 <sup>3</sup> / <sub>4</sub> "	10'-1"	10'-0 <sup>3</sup> / <sub>4</sub> "
11	5'-5 <sup>3</sup> / <sub>4</sub> "	5'-3 <sup>3</sup> / <sub>4</sub> "	5'-7"	5'-6 <sup>3</sup> / <sub>4</sub> "	11	7'-3 <sup>3</sup> / <sub>4</sub> "	7'-1 <sup>3</sup> / <sub>4</sub> "	7'-5"	7'-4 <sup>3</sup> / <sub>4</sub> "	11	10'-11 <sup>3</sup> / <sub>4</sub> "	10'-9 <sup>3</sup> / <sub>4</sub> "	11'-1"	
12	5'-11 <sup>3</sup> / <sub>4</sub> "	5'-9 <sup>3</sup> / <sub>4</sub> "	6'-1"	6'-0 <sup>3</sup> / <sub>4</sub> "	12	7'-11 <sup>3</sup> / <sub>4</sub> "	7'-9 <sup>3</sup> / <sub>4</sub> "	8'-1"	8'-0 <sup>3</sup> / <sub>4</sub> "	12	11'-11 <sup>3</sup> / <sub>4</sub> "	11'-9 <sup>3</sup> / <sub>4</sub> "	12'-1"	
13	6'-5 <sup>3</sup> / <sub>4</sub> "	6'-3 <sup>3</sup> / <sub>4</sub> "	6'-7"	6'-6 <sup>3</sup> / <sub>4</sub> "	13	8'-7 <sup>3</sup> / <sub>4</sub> "	8'-5 <sup>3</sup> / <sub>4</sub> "	8'-9"	8'-8 <sup>3</sup> / <sub>4</sub> "	13	12'-11 <sup>3</sup> / <sub>4</sub> "	12'-9 <sup>3</sup> / <sub>4</sub> "	13'-1"	
14	6'-11 <sup>3</sup> / <sub>4</sub> "	6'-9 <sup>3</sup> / <sub>4</sub> "	7'-1"	7'-0 <sup>3</sup> / <sub>4</sub> "	14	9'-3 <sup>3</sup> / <sub>4</sub> "	9'-1 <sup>3</sup> / <sub>4</sub> "	9'-5"	9'-4 <sup>3</sup> / <sub>4</sub> "	14	13'-11 <sup>3</sup> / <sub>4</sub> "	13'-9 <sup>3</sup> / <sub>4</sub> "	14'-1"	
15	7'-5 <sup>3</sup> / <sub>4</sub> "	7'-3 <sup>3</sup> / <sub>4</sub> "	7'-7"	7'-6 <sup>3</sup> / <sub>4</sub> "	15	9'-11 <sup>3</sup> / <sub>4</sub> "	9'-9 <sup>3</sup> / <sub>4</sub> "	10'-1"	10'-0 <sup>3</sup> / <sub>4</sub> "	15	14'-11 <sup>3</sup> / <sub>4</sub> "	14'-9 <sup>3</sup> / <sub>4</sub> "	15'-1"	
16	7'-11 <sup>3</sup> / <sub>4</sub> "	7'-9 <sup>3</sup> / <sub>4</sub> "	8'-1"	8'-0 <sup>3</sup> / <sub>4</sub> "	16	10'-7 <sup>3</sup> / <sub>4</sub> "	10'-5 <sup>3</sup> / <sub>4</sub> "	10'-9"		16	15'-11 <sup>3</sup> / <sub>4</sub> "	15'-9 <sup>3</sup> / <sub>4</sub> "	16'-1"	
17	8'-5 <sup>3</sup> / <sub>4</sub> "	8'-3 <sup>3</sup> / <sub>4</sub> "	8'-7"	8'-6 <sup>3</sup> / <sub>4</sub> "	17	11'-3 <sup>3</sup> / <sub>4</sub> "	11'-1 <sup>3</sup> / <sub>4</sub> "	11'-5"		17	16'-11 <sup>3</sup> / <sub>4</sub> "	16'-9 <sup>3</sup> / <sub>4</sub> "	17'-1"	
18	8'-11 <sup>3</sup> / <sub>4</sub> "	8'-9 <sup>3</sup> / <sub>4</sub> "	9'-1"	9'-0 <sup>3</sup> / <sub>4</sub> "	18	11'-11 <sup>3</sup> / <sub>4</sub> "	11'-9 <sup>3</sup> / <sub>4</sub> "	12'-1"		18	17'-11 <sup>3</sup> / <sub>4</sub> "	17'-9 <sup>3</sup> / <sub>4</sub> "	18'-1"	
19	9'-5 <sup>3</sup> / <sub>4</sub> "	9'-3 <sup>3</sup> / <sub>4</sub> "	9'-7"	9'-6 <sup>3</sup> / <sub>4</sub> "	19	12'-7 <sup>3</sup> / <sub>4</sub> "	12'-5 <sup>3</sup> / <sub>4</sub> "	12'-9"		19	18'-11 <sup>3</sup> / <sub>4</sub> "	18'-9 <sup>3</sup> / <sub>4</sub> "	19'-1"	
20	9'-11 <sup>3</sup> / <sub>4</sub> "	9'-9 <sup>3</sup> / <sub>4</sub> "	10'-1"	10'-0 <sup>3</sup> / <sub>4</sub> "	20	13'-3 <sup>3</sup> / <sub>4</sub> "	13'-1 <sup>3</sup> / <sub>4</sub> "	13'-5"		20	19'-11 <sup>3</sup> / <sub>4</sub> "	19'-9 <sup>3</sup> / <sub>4</sub> "	20'-1"	
21	10'-5 <sup>3</sup> / <sub>4</sub> "	10'-3 <sup>3</sup> / <sub>4</sub> "	10'-7"		21	13'-11 <sup>3</sup> / <sub>4</sub> "	13'-9 <sup>3</sup> / <sub>4</sub> "	14'-1"		21	20'-11 <sup>3</sup> / <sub>4</sub> "	20'-9 <sup>3</sup> / <sub>4</sub> "		
22	10'-11 <sup>3</sup> / <sub>4</sub> "	10'-9 <sup>3</sup> / <sub>4</sub> "	11'-1"		22	14'-7 <sup>3</sup> / <sub>4</sub> "	14'-5 <sup>3</sup> / <sub>4</sub> "	14'-9"		22	21'-11 <sup>3</sup> / <sub>4</sub> "	21'-9 <sup>3</sup> / <sub>4</sub> "		
23	11'-5 <sup>3</sup> / <sub>4</sub> "	11'-3 <sup>3</sup> / <sub>4</sub> "	11'-7"		23	15'-3 <sup>3</sup> / <sub>4</sub> "	15'-1 <sup>3</sup> / <sub>4</sub> "	15'-5"		23	22'-11 <sup>3</sup> / <sub>4</sub> "	22'-9 <sup>3</sup> / <sub>4</sub> "		
24	11'-11 <sup>3</sup> / <sub>4</sub> "	11'-9 <sup>3</sup> / <sub>4</sub> "	12'-1"		24	15'-11 <sup>3</sup> / <sub>4</sub> "	15'-9 <sup>3</sup> / <sub>4</sub> "	16'-1"		24	23'-11 <sup>3</sup> / <sub>4</sub> "	23'-9 <sup>3</sup> / <sub>4</sub> "		
25	12'-5 <sup>3</sup> / <sub>4</sub> "	12'-3 <sup>3</sup> / <sub>4</sub> "	12'-7"		25	16'-7 <sup>3</sup> / <sub>4</sub> "	16'-5 <sup>3</sup> / <sub>4</sub> "	16'-9"		25	24'-11 <sup>3</sup> / <sub>4</sub> "	24'-9 <sup>3</sup> / <sub>4</sub> "		
26	12'-11 <sup>3</sup> / <sub>4</sub> "	12'-9 <sup>3</sup> / <sub>4</sub> "	13'-1"		26	17'-3 <sup>3</sup> / <sub>4</sub> "	17'-1 <sup>3</sup> / <sub>4</sub> "	17'-5"						
27	13'-5 <sup>3</sup> / <sub>4</sub> "	13'-3 <sup>3</sup> / <sub>4</sub> "	13'-7"		27	17'-11 <sup>3</sup> / <sub>4</sub> "	17'-9 <sup>3</sup> / <sub>4</sub> "	18'-1"						
28	13'-11 <sup>3</sup> / <sub>4</sub> "	13'-9 <sup>3</sup> / <sub>4</sub> "	14'-1"		28	18'-7 <sup>3</sup> / <sub>4</sub> "	18'-5 <sup>3</sup> / <sub>4</sub> "	18'-9"						
29	14'-5 <sup>3</sup> / <sub>4</sub> "	14'-3 <sup>3</sup> / <sub>4</sub> "	14'-7"		29	19'-3 <sup>3</sup> / <sub>4</sub> "	19'-1 <sup>3</sup> / <sub>4</sub> "	19'-5"						
30	14'-11 <sup>3</sup> / <sub>4</sub> "	14'-9 <sup>3</sup> / <sub>4</sub> "	15'-1"		30	19'-11 <sup>3</sup> / <sub>4</sub> "	19'-9 <sup>3</sup> / <sub>4</sub> "	20'-1"						
31	15'-5 <sup>3</sup> / <sub>4</sub> "	15'-3 <sup>3</sup> / <sub>4</sub> "	15'-7"		31	20'-7 <sup>3</sup> / <sub>4</sub> "	20'-5 <sup>3</sup> / <sub>4</sub> "							
32	15'-11 <sup>3</sup> / <sub>4</sub> "	15'-9 <sup>3</sup> / <sub>4</sub> "	16'-1"		32	21'-3 <sup>3</sup> / <sub>4</sub> "	21'-1 <sup>3</sup> / <sub>4</sub> "							
33	16'-5 <sup>3</sup> / <sub>4</sub> "	16'-3 <sup>3</sup> / <sub>4</sub> "	16'-7"		33	21'-11 <sup>3</sup> / <sub>4</sub> "	21'-9 <sup>3</sup> / <sub>4</sub> "							
34	16'-11 <sup>3</sup> / <sub>4</sub> "	16'-9 <sup>3</sup> / <sub>4</sub> "	17'-1"		34	22'-7 <sup>3</sup> / <sub>4</sub> "	22'-5 <sup>3</sup> / <sub>4</sub> "							
35	17'-5 <sup>3</sup> / <sub>4</sub> "	17'-3 <sup>3</sup> / <sub>4</sub> "	17'-7"		35	23'-3 <sup>3</sup> / <sub>4</sub> "	23'-1 <sup>3</sup> / <sub>4</sub> "							
36	17'-11 <sup>3</sup> / <sub>4</sub> "	17'-9 <sup>3</sup> / <sub>4</sub> "	18'-1"		36	23'-11 <sup>3</sup> / <sub>4</sub> "	23'-9 <sup>3</sup> / <sub>4</sub> "							
37	18'-5 <sup>3</sup> / <sub>4</sub> "	18'-3 <sup>3</sup> / <sub>4</sub> "	18'-7"		37	24'-7 <sup>3</sup> / <sub>4</sub> "	24'-5 <sup>3</sup> / <sub>4</sub> "							
38	18'-11 <sup>3</sup> / <sub>4</sub> "	18'-9 <sup>3</sup> / <sub>4</sub> "	19'-1"		38	25'-3 <sup>3</sup> / <sub>4</sub> "	25'-1 <sup>3</sup> / <sub>4</sub> "							
39	19'-5 <sup>3</sup> / <sub>4</sub> "	19'-3 <sup>3</sup> / <sub>4</sub> "	19'-7"											
40	19'-11 <sup>3</sup> / <sub>4</sub> "	19'-9 <sup>3</sup> / <sub>4</sub> "	20'-1"											
41	20'-5 <sup>3</sup> / <sub>4</sub> "	20'-3 <sup>3</sup> / <sub>4</sub> "												
42	20'-11 <sup>3</sup> / <sub>4</sub> "	20'-9 <sup>3</sup> / <sub>4</sub> "												
43	21'-5 <sup>3</sup> / <sub>4</sub> "	21'-3 <sup>3</sup> / <sub>4</sub> "												
44	21'-11 <sup>3</sup> / <sub>4</sub> "	21'-9 <sup>3</sup> / <sub>4</sub> "												
45	22'-5 <sup>3</sup> / <sub>4</sub> "	22'-3 <sup>3</sup> / <sub>4</sub> "												
46	22'-11 <sup>3</sup> / <sub>4</sub> "	22'-9 <sup>3</sup> / <sub>4</sub> "												
47	23'-5 <sup>3</sup> / <sub>4</sub> "	23'-3 <sup>3</sup> / <sub>4</sub> "												
48	23'-11 <sup>3</sup> / <sub>4</sub> "	23'-9 <sup>3</sup> / <sub>4</sub> "												
49	24'-5 <sup>3</sup> / <sub>4</sub> "	24'-3 <sup>3</sup> / <sub>4</sub> "												
50	24'-11 <sup>3</sup> / <sub>4</sub> "	24'-9 <sup>3</sup> / <sub>4</sub> "												

Storefronts

## Art Glass

General Glass  
Catalogues

**Miscellaneous**



## Exterior Panel Size Limitations with minimum expansion and anchorage requirements

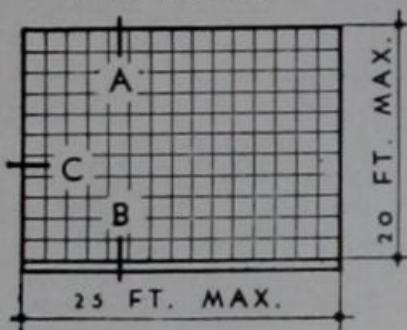
**GENERAL:** Construction supporting panels over 144 square feet in area must be of a type which will provide a minimum of movement and settlement.

Structural members shown

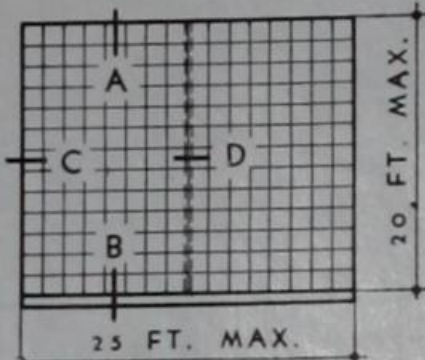
are to indicate principles of construction. Sizes must be calculated for loads applied. Information shown on these sheets is not intended to conflict with any local building code requirements.

### LARGE SIMPLE PANELS

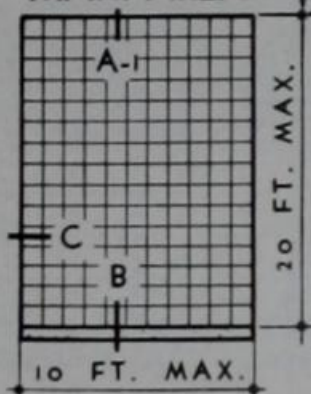
144 SQ. FT.  
MAX. AREA



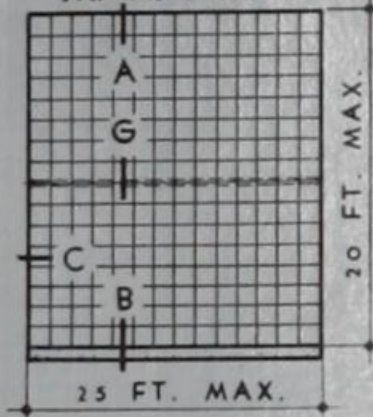
250 SQ. FT.  
MAX. AREA



144 SQ. FT.  
MAX. AREA

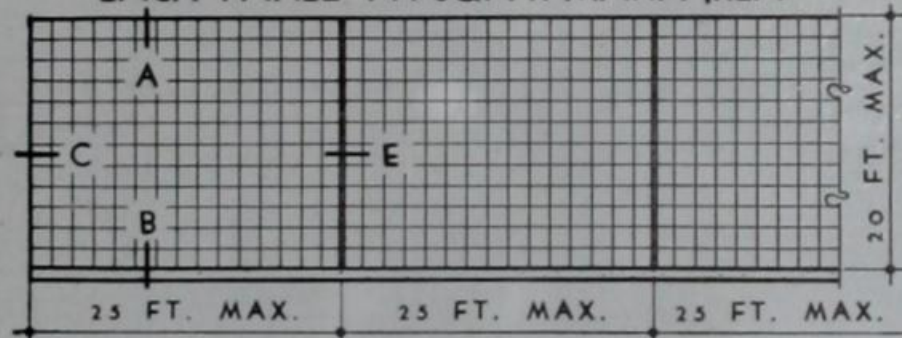


250 SQ. FT.  
MAX. AREA

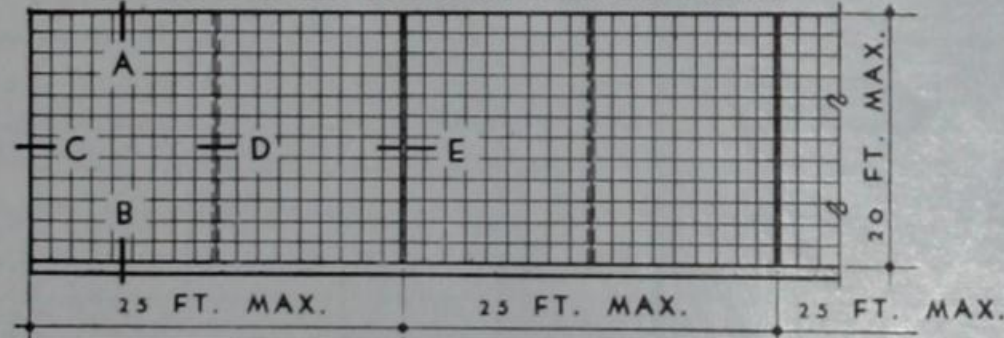


### LARGE CONTINUOUS PANELS

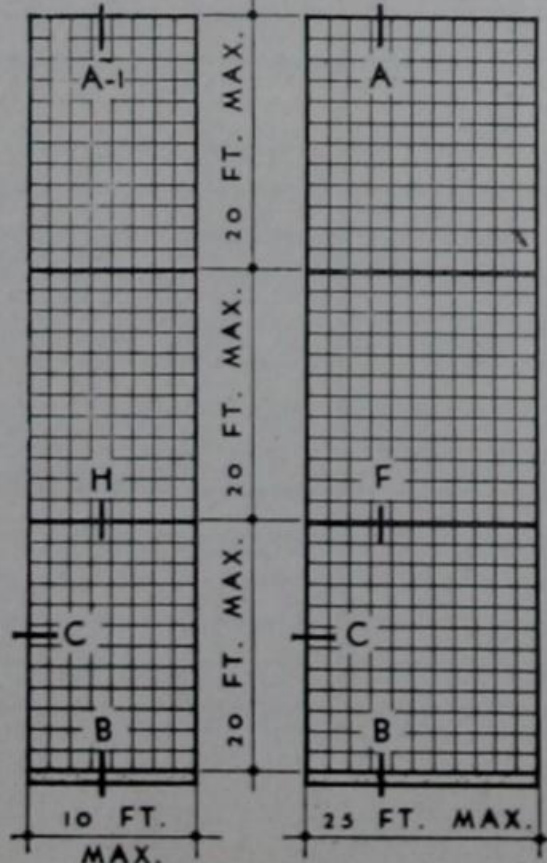
EACH PANEL 144 SQ. FT. MAX. AREA



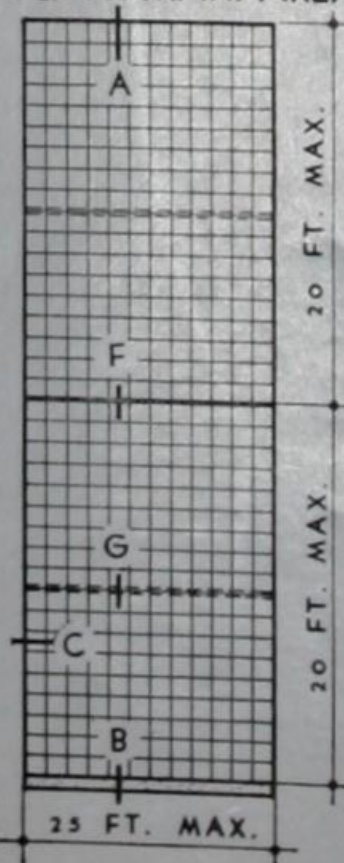
EACH PANEL 250 SQ. FT. MAX. AREA



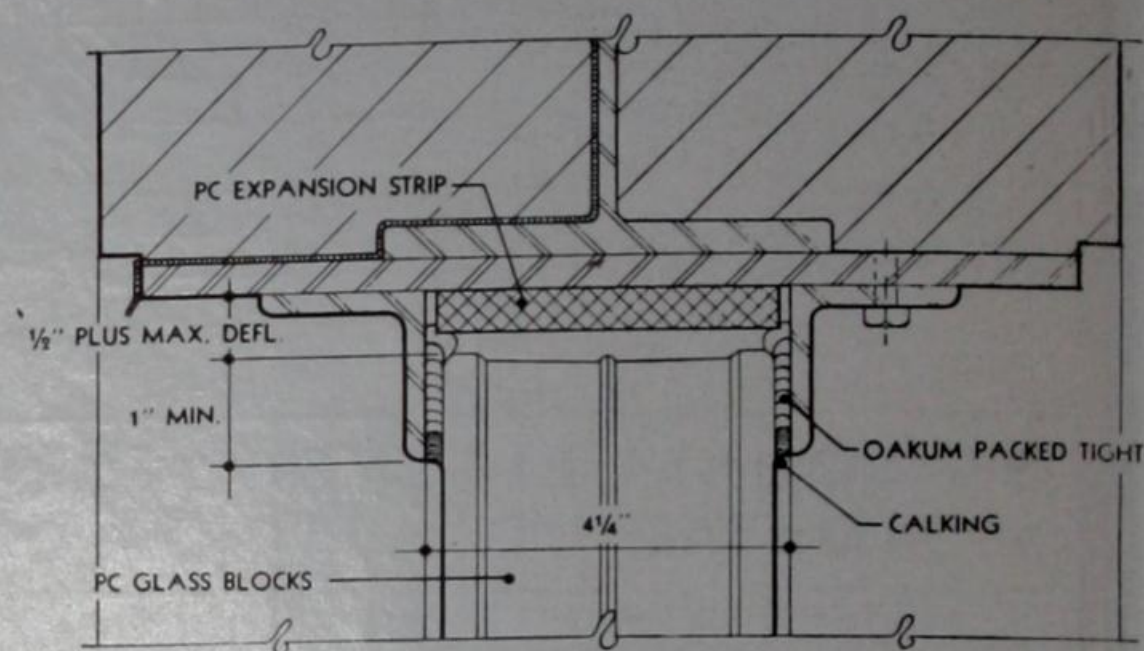
EACH PANEL  
144 SQ. FT. MAX. AREA



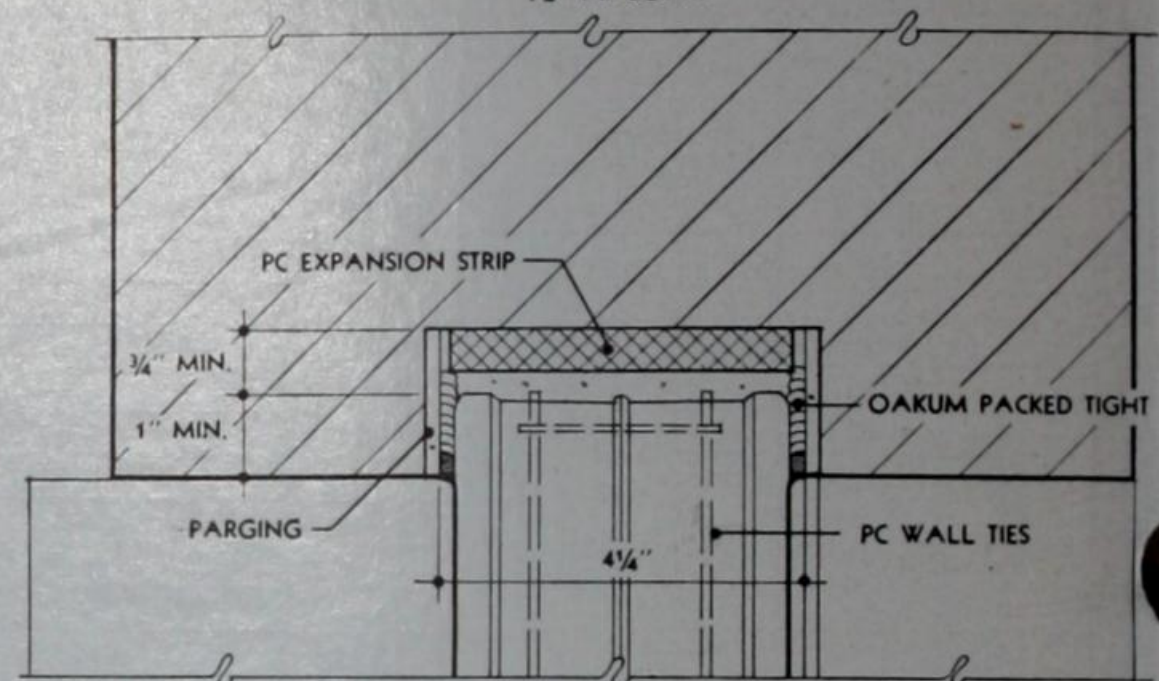
EACH PANEL  
250 SQ. FT. MAX. AREA



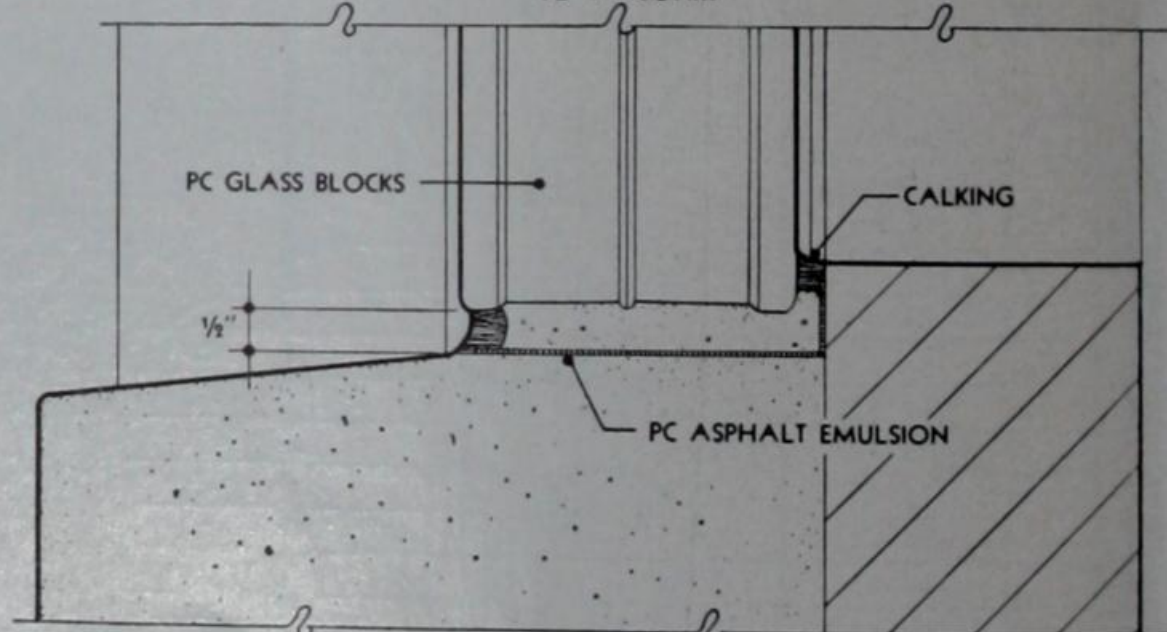
# PC GLASS



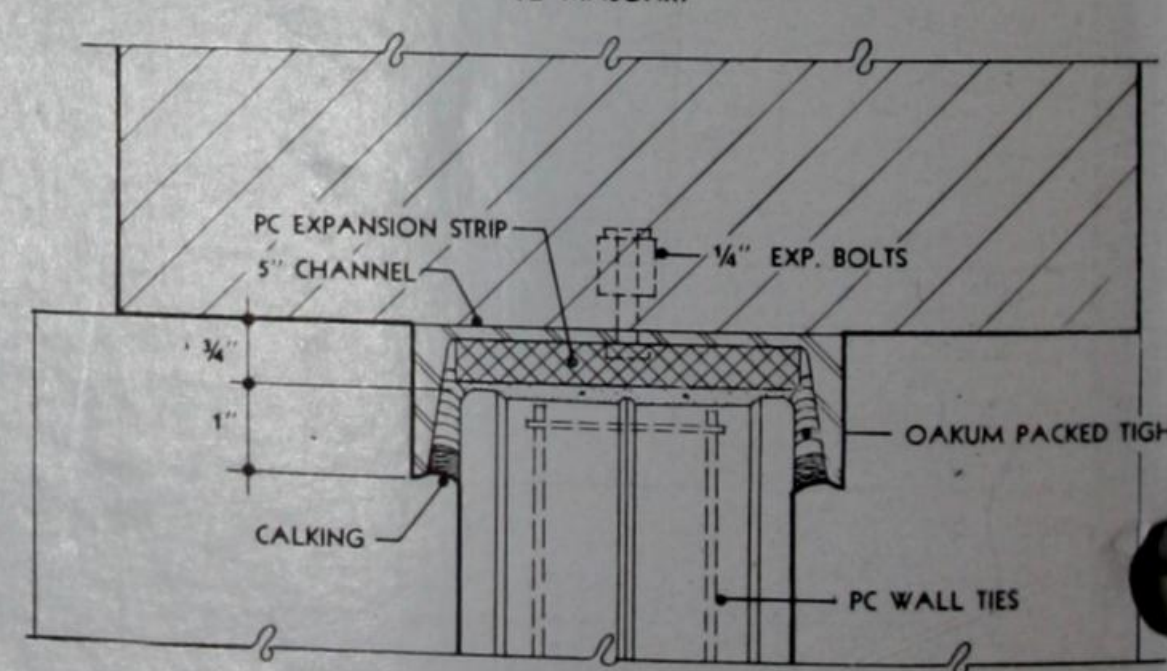
SECTION "A"  
12" MASONRY



SECTION "C"  
12" MASONRY



SECTION "B"  
12" MASONRY

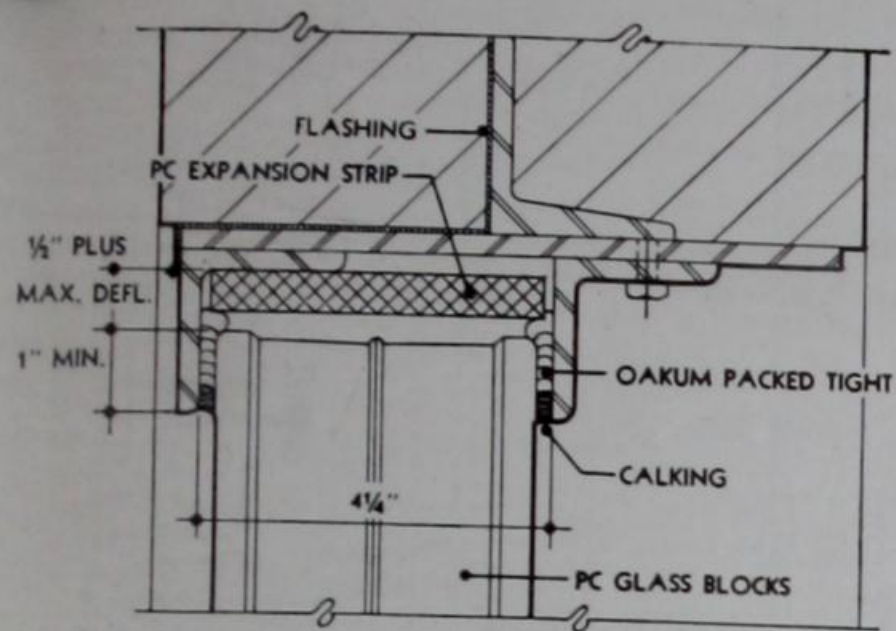


ALTERNATE SECTION "C"  
8" OR 12" MASONRY

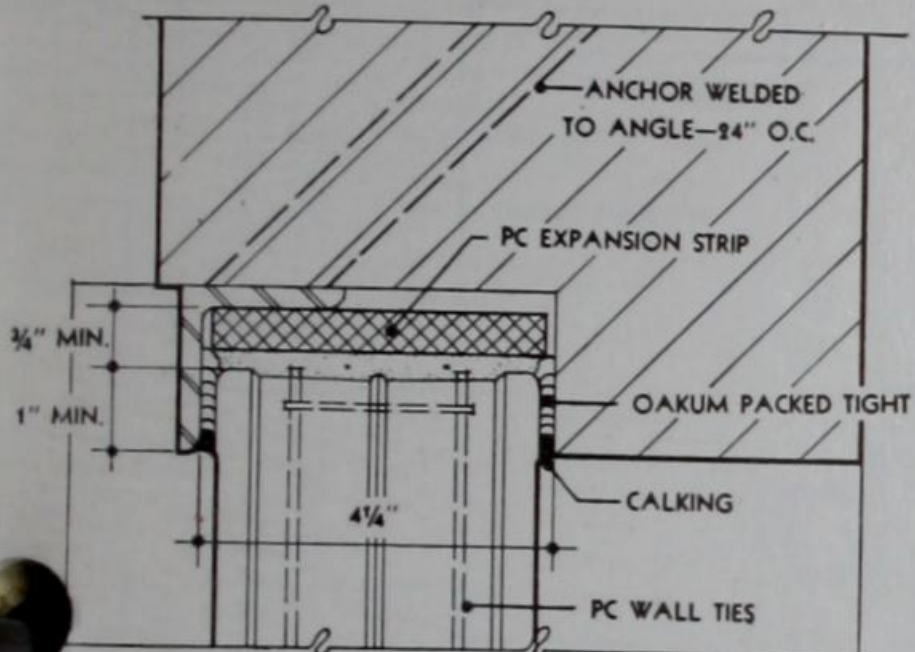
SCALE 3" = 1'-0"



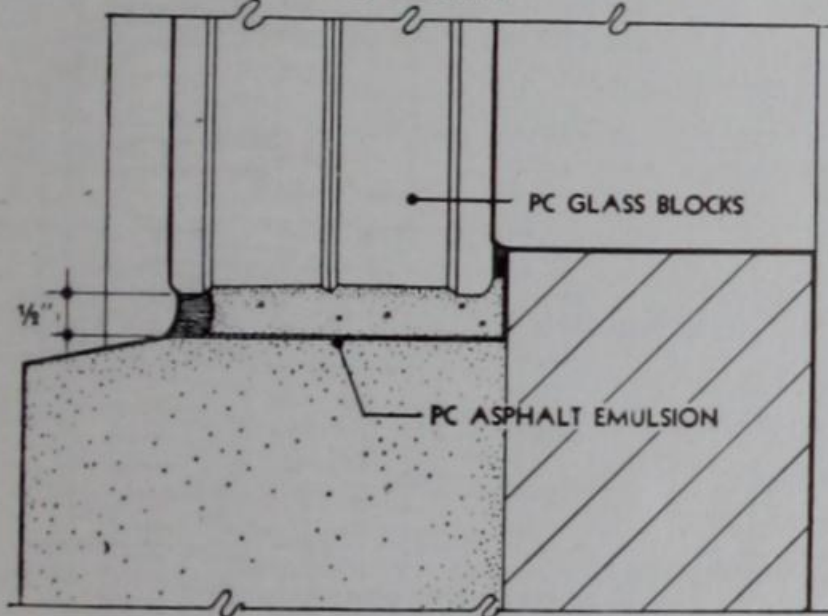
# BLOCKS—INSTALLATION DETAILS



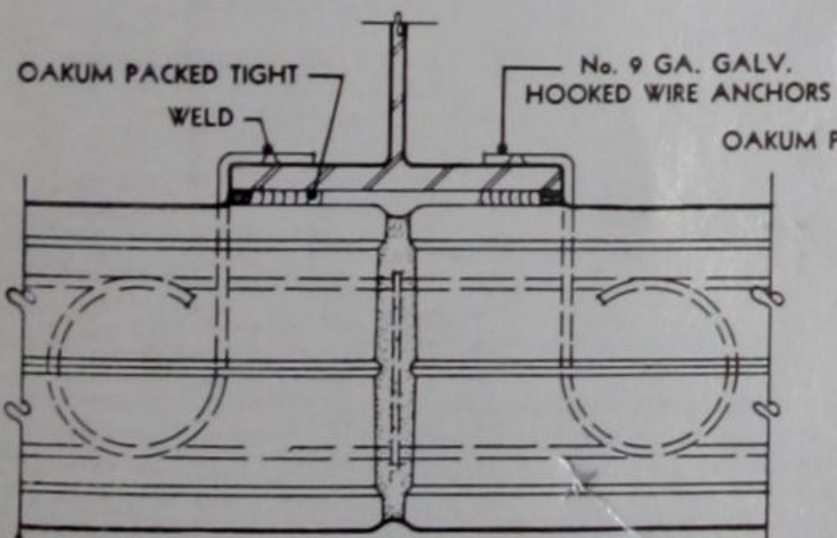
SECTION "A"  
8" MASONRY



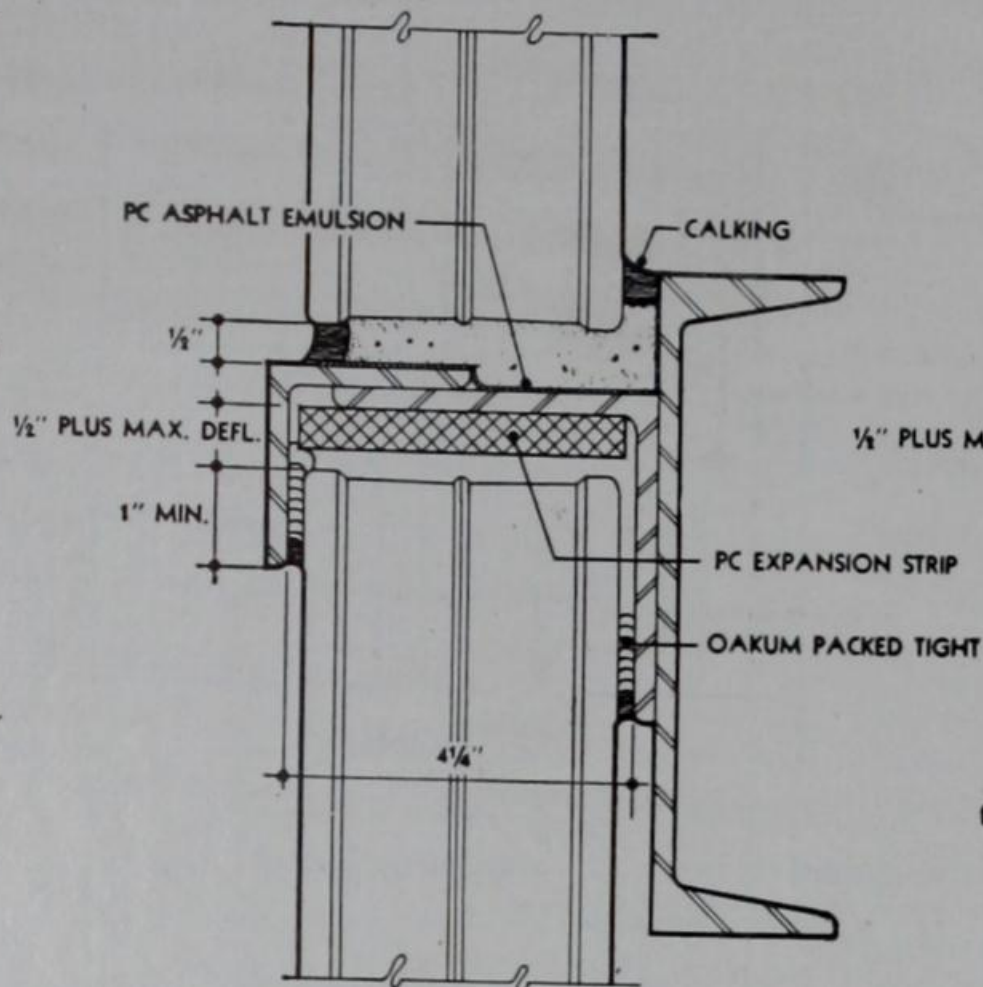
SECTION "C"  
8" MASONRY



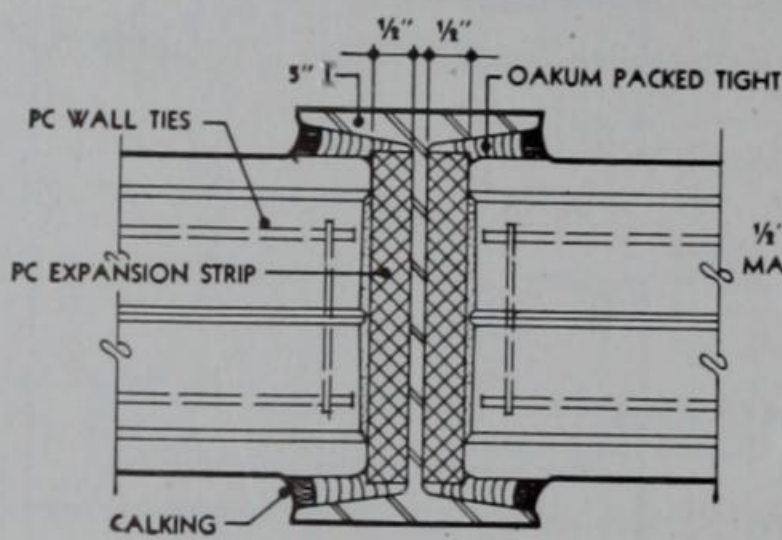
SECTION "B"  
8" MASONRY



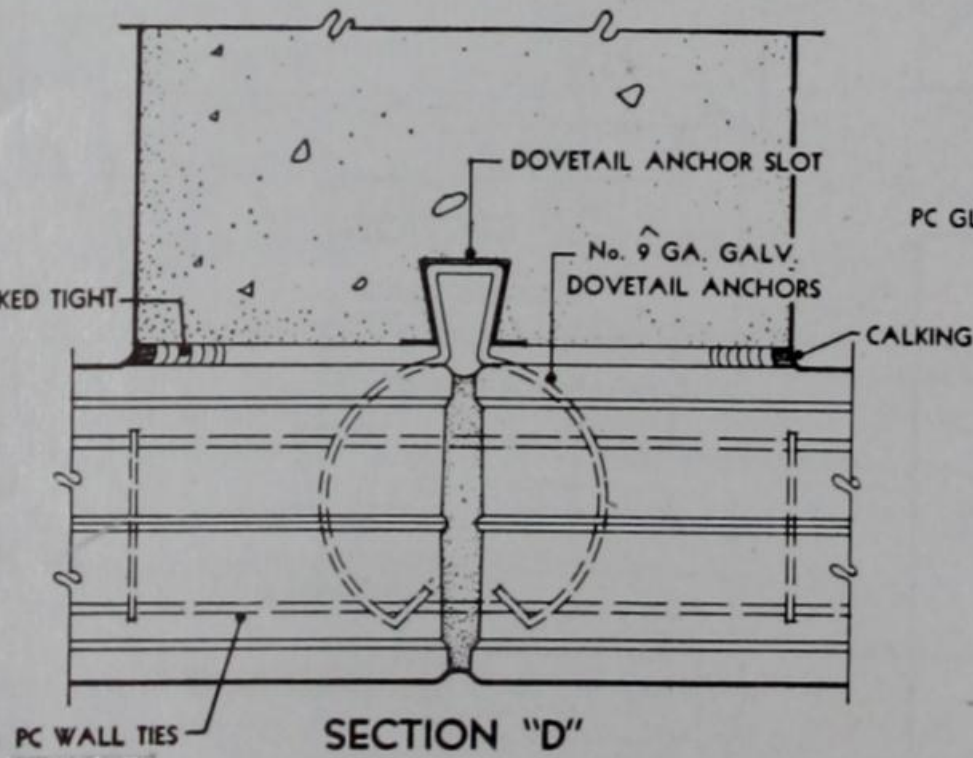
SECTION "D"



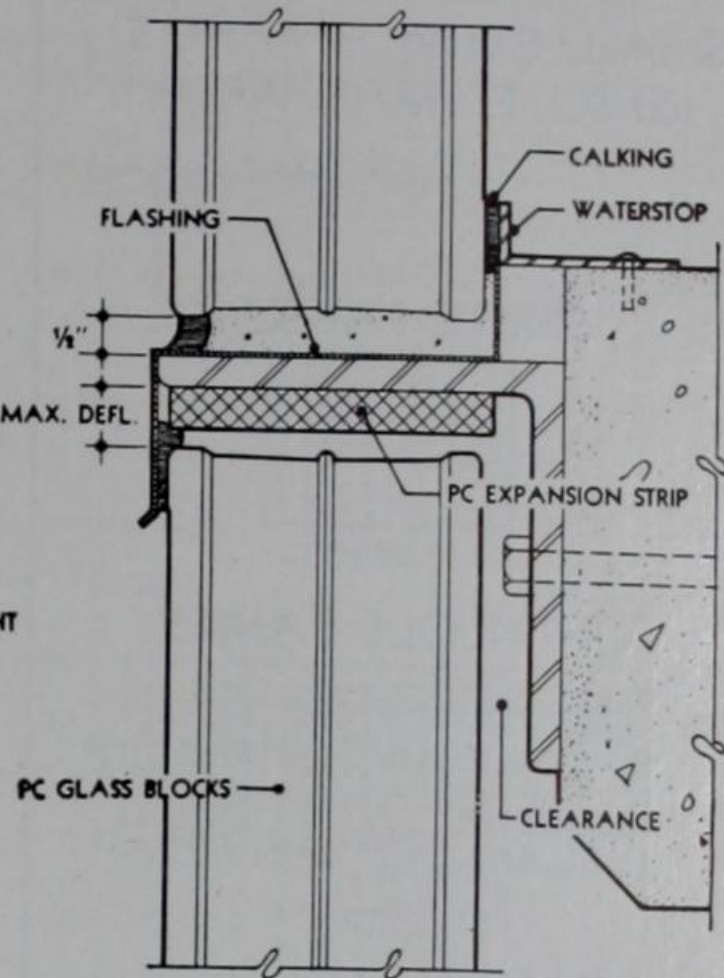
SECTION "F"



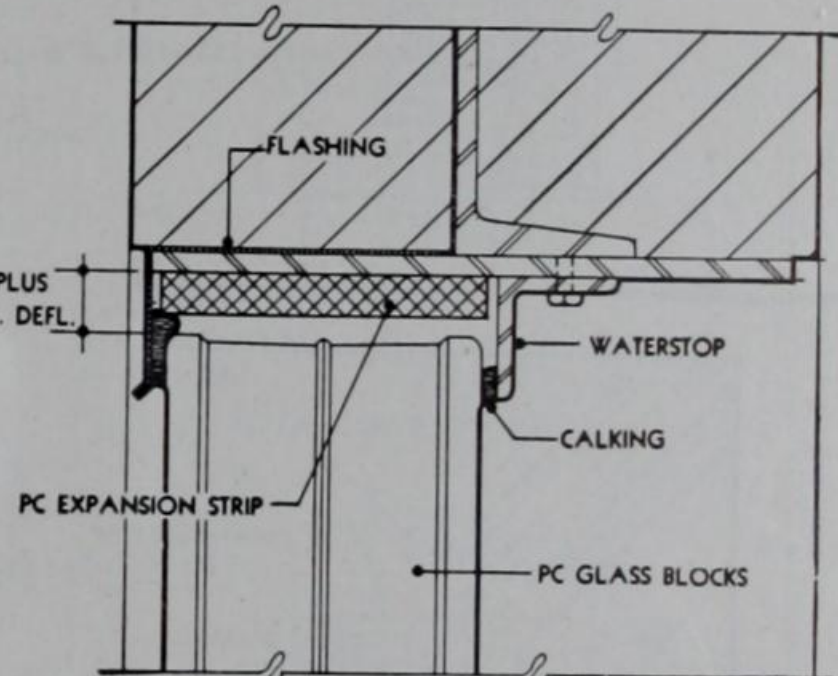
SECTION "E"



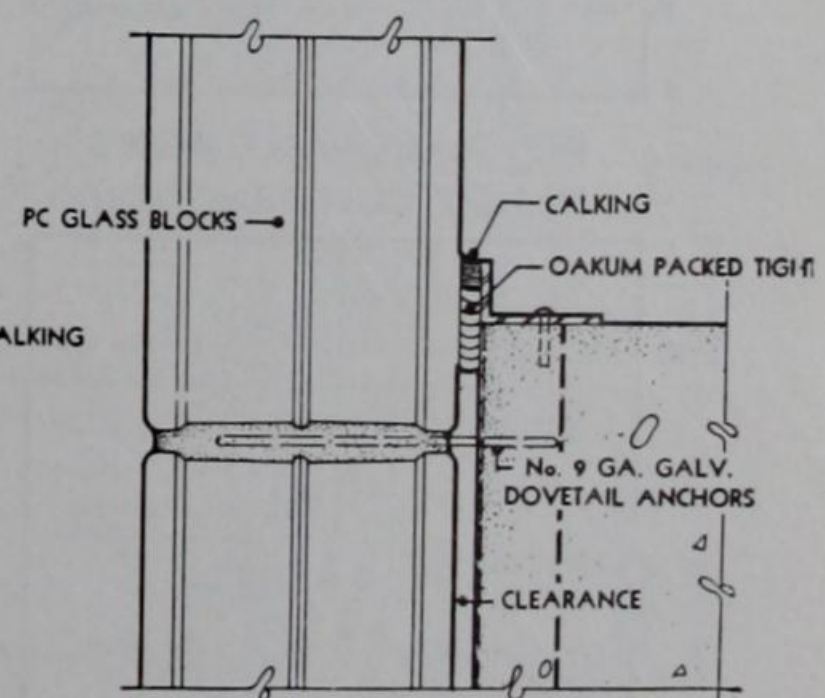
SECTION "D"



SECTION "H"



SECTION "A-I"



SECTION "G"

SCALE 3" = 1'-0"

Storefronts

Art Glass

General Glass  
Catalogues

Miscellaneous



Wall anchors providing lateral support for glass block panels are restricted only by building code requirements and the discretion of the architect. Where wall anchors are forbidden, chase construction shall be used.

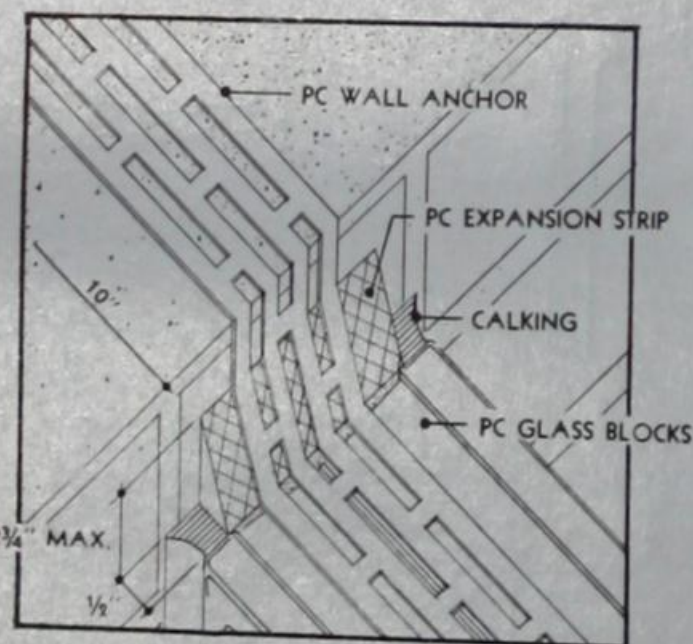
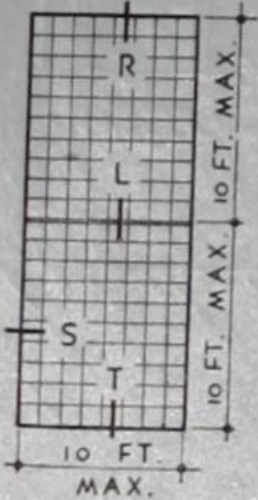
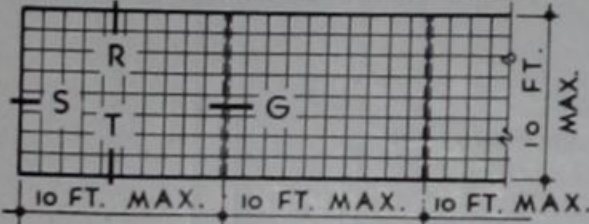
# INSTALLATION DETAILS— FOR SMALL EXTERIOR PANELS

## SMALL EXTERIOR PANELS 100 SQ. FT. MAX. AREA

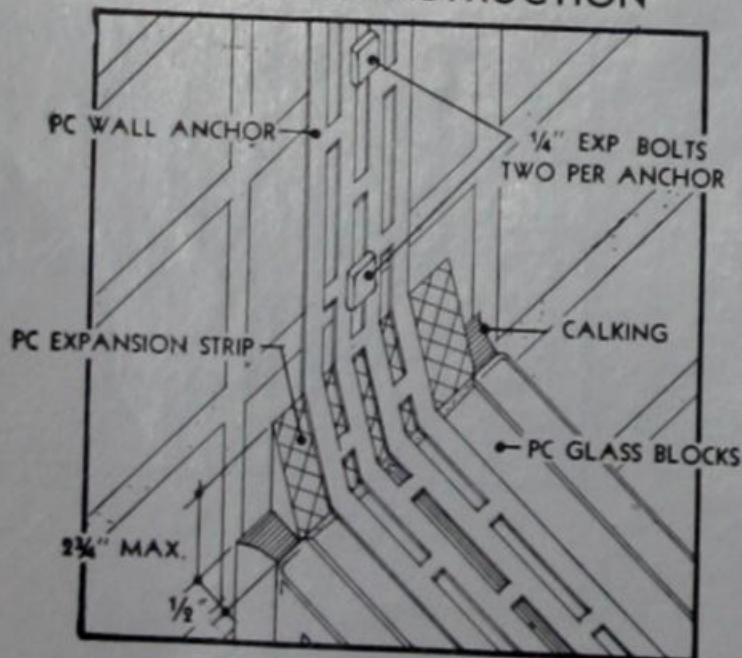
### SIMPLE PANELS



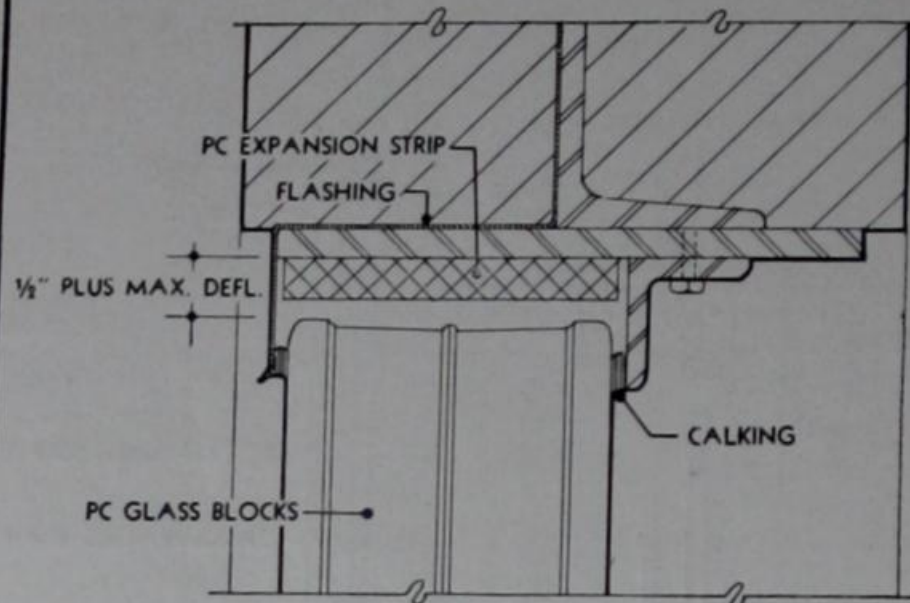
### CONTINUOUS PANELS



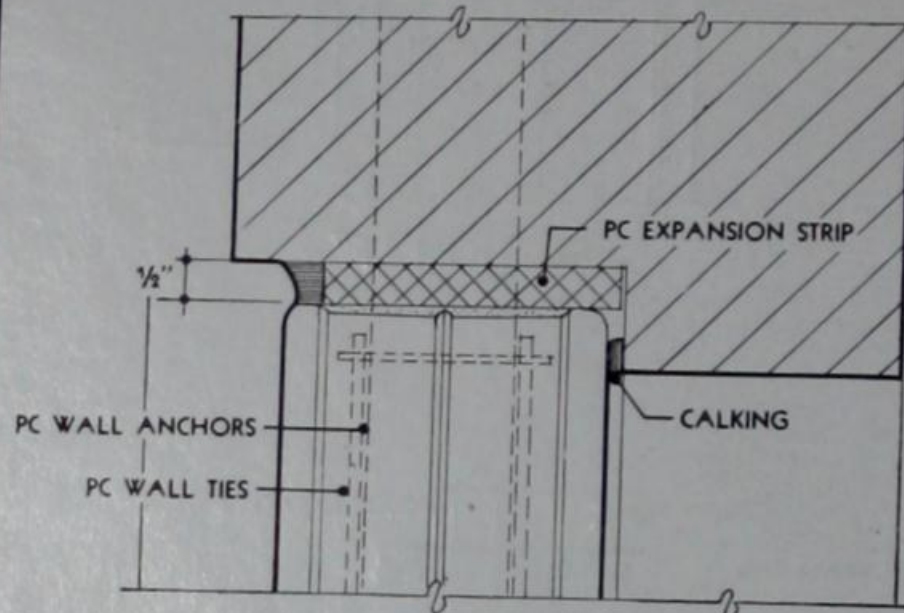
### PC WALL ANCHORS IN NEW CONSTRUCTION



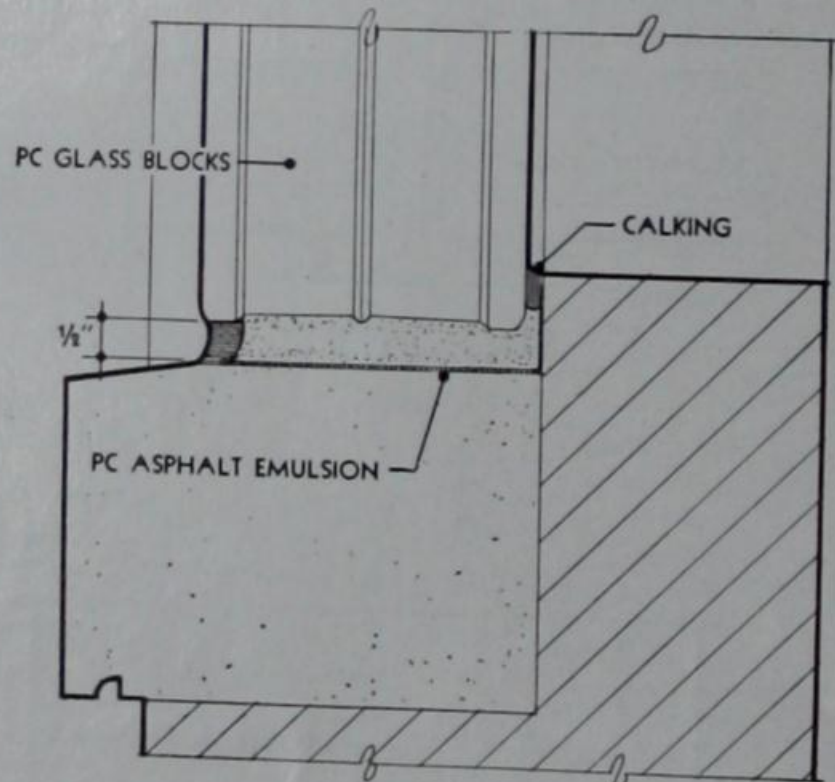
### PC WALL ANCHORS IN EXISTING CONSTRUCTION



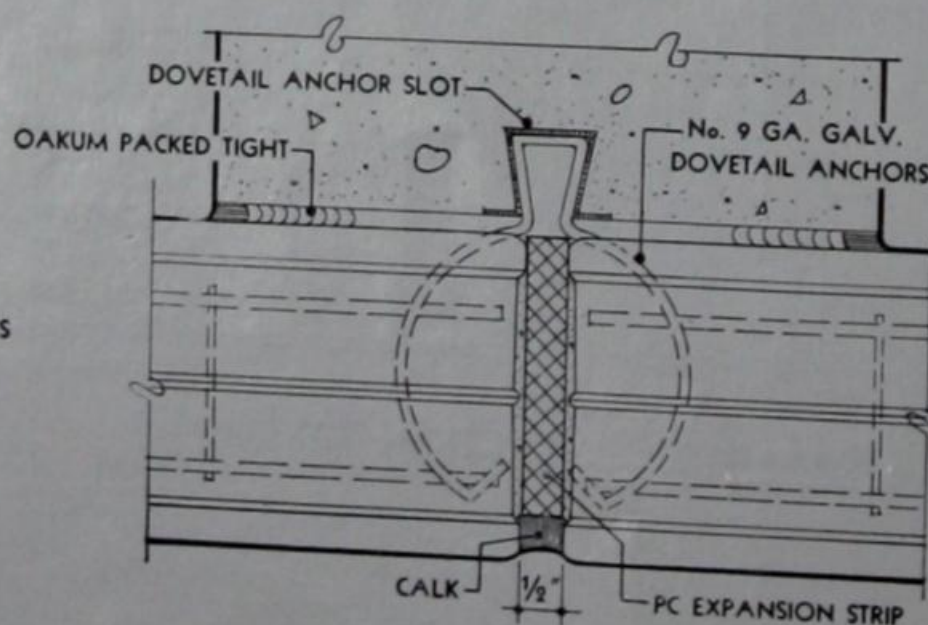
### SECTION "R"



### SECTION "S"

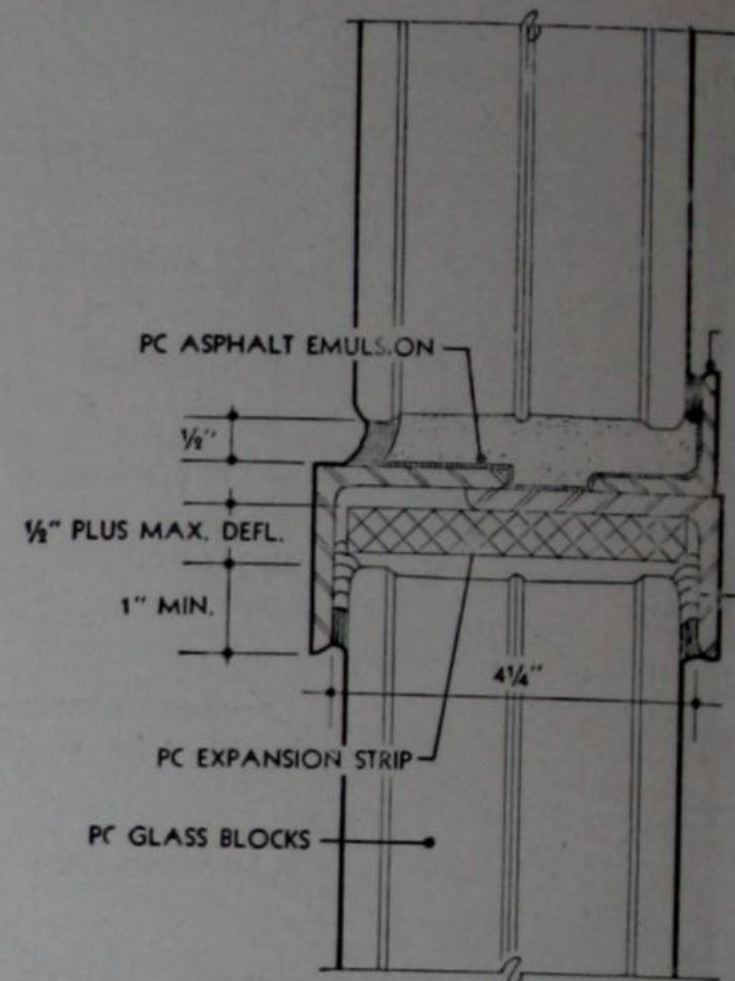


### SECTION "T"

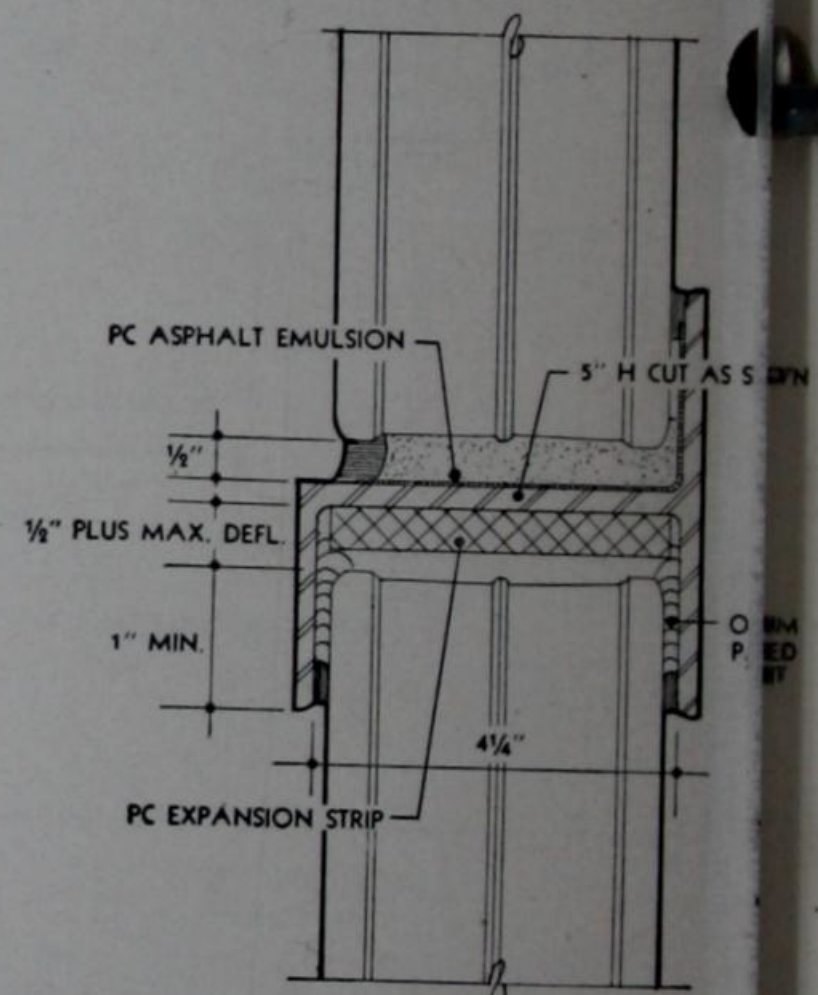


### SECTION "G"

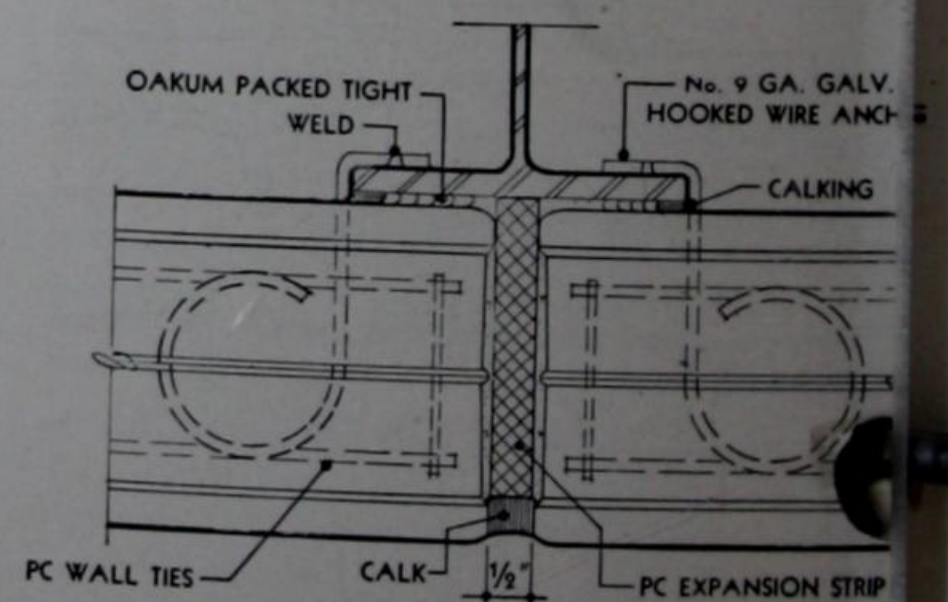
SCALE 3"=1'-0"



### SECTION "L"



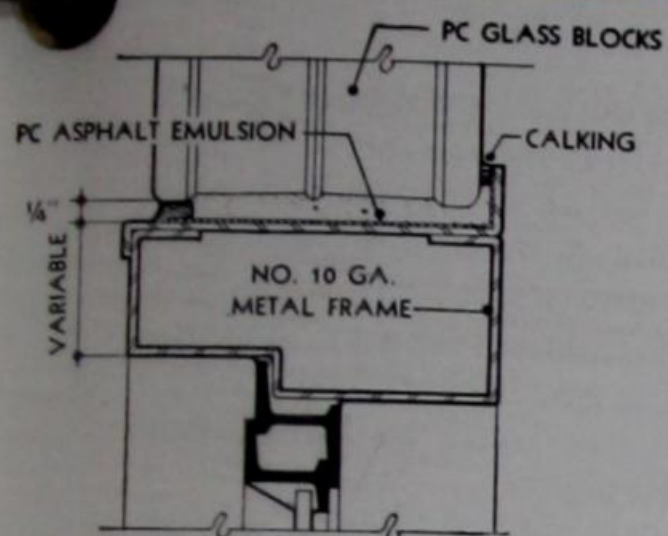
### SECTION "L"



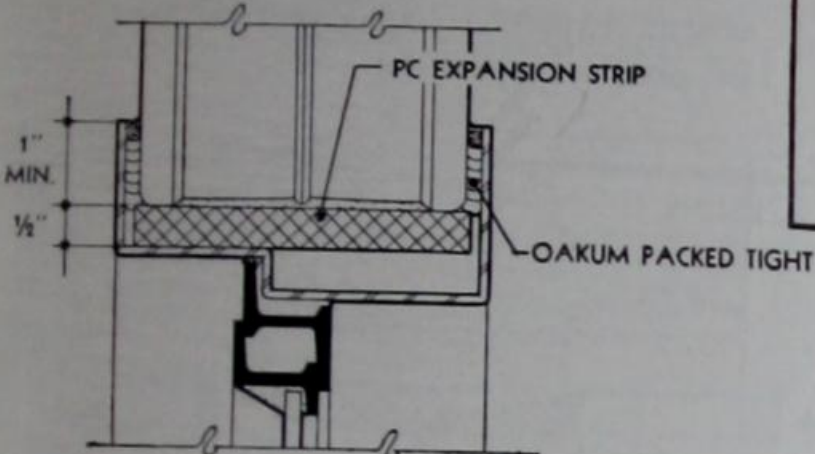
### SECTION "G"



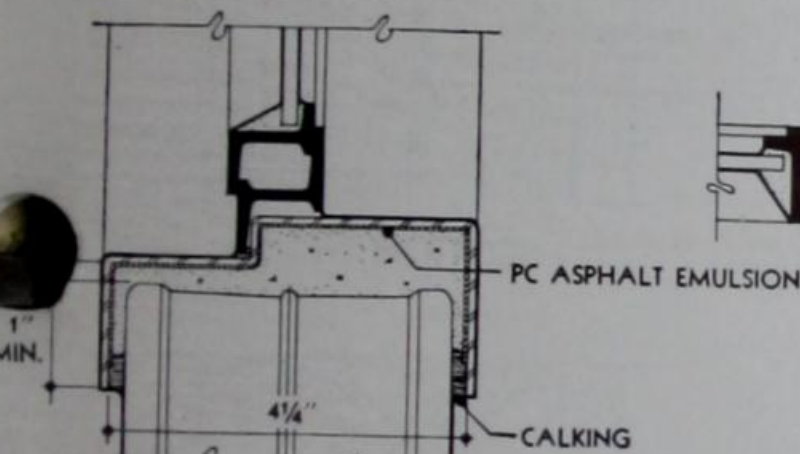
# INSTALLATION DETAILS— FOR SASH AND GLASS BLOCK COMBINATIONS



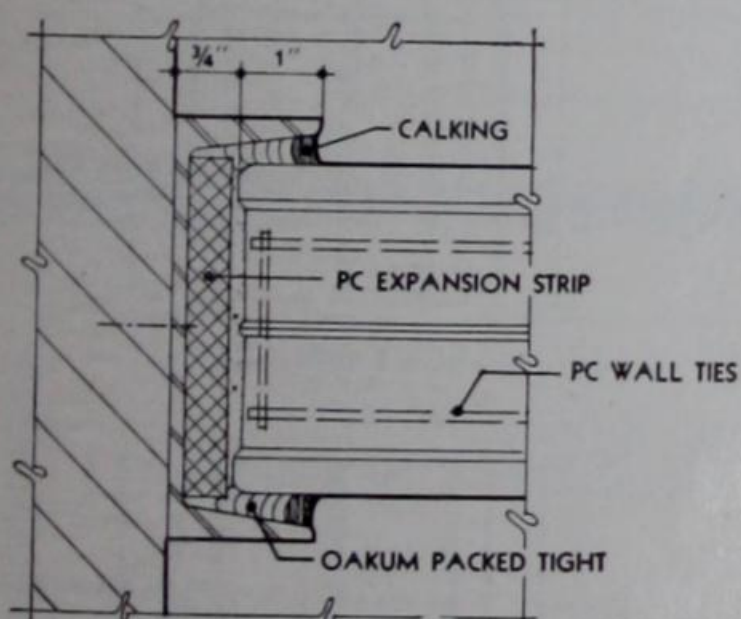
SECTION "H"



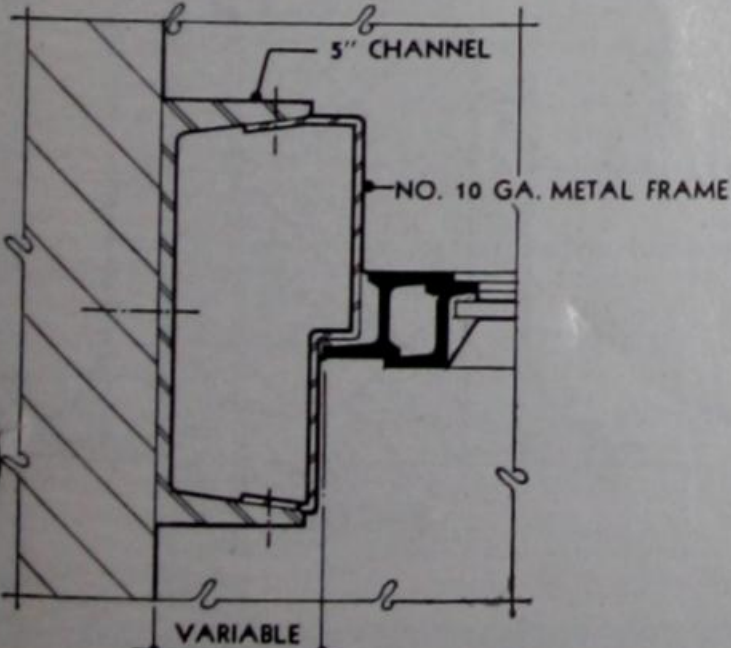
SECTION "L"



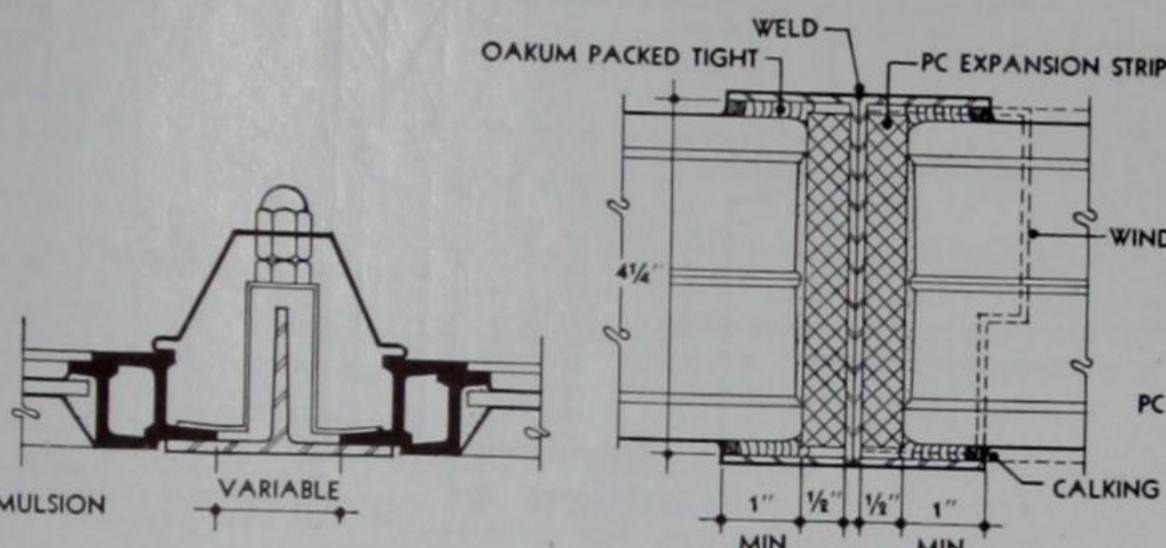
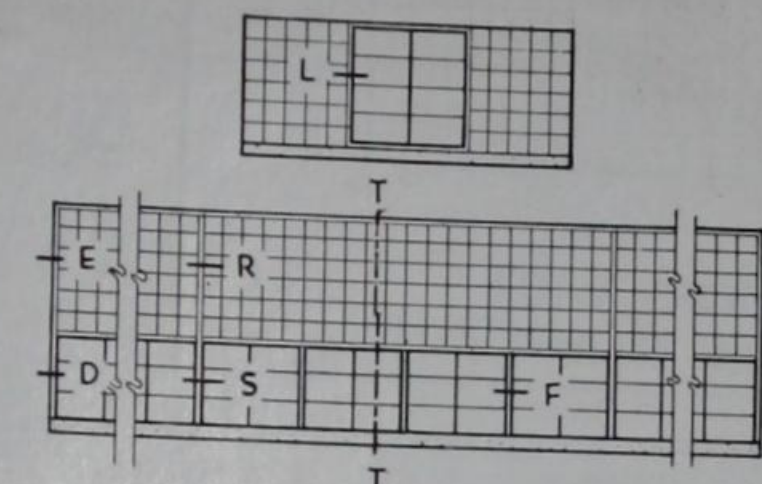
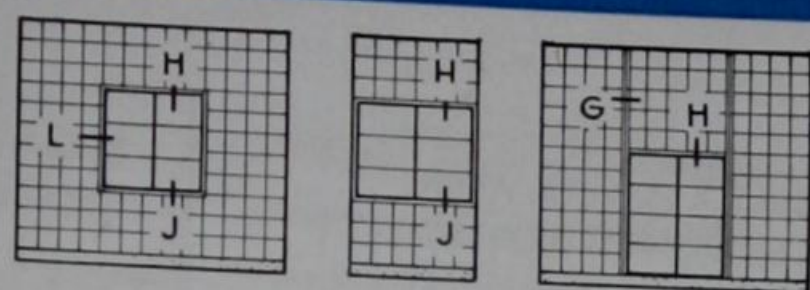
SECTION "J"



SECTION "E"

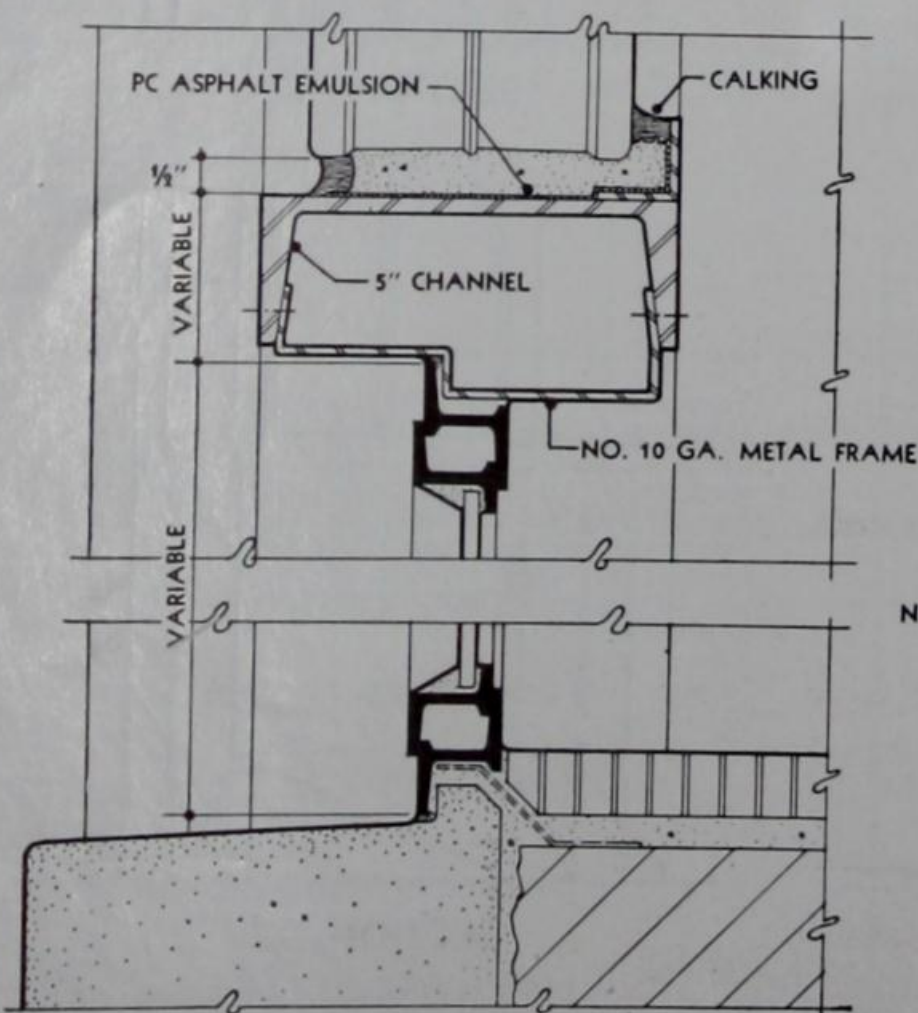
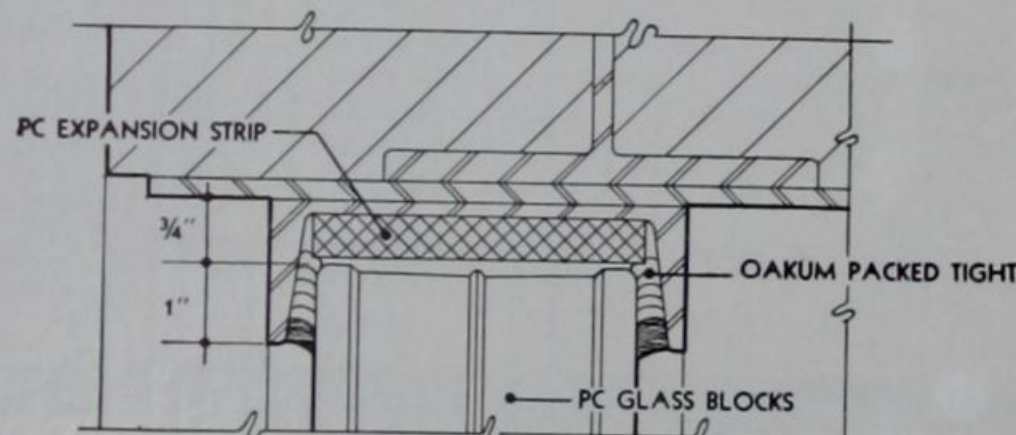


SECTION "D"



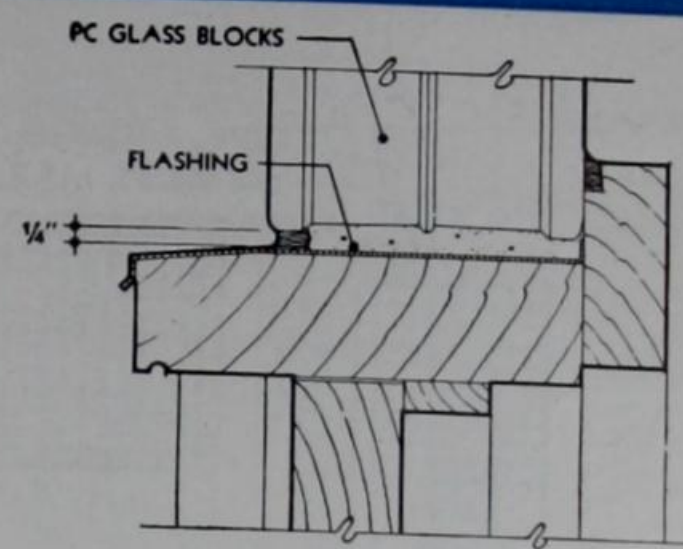
SECTION "F"

SECTION "G"

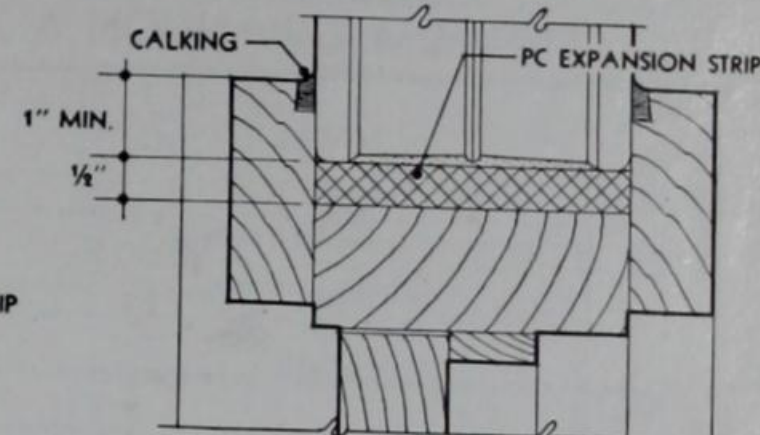


SECTION "T"- "T"

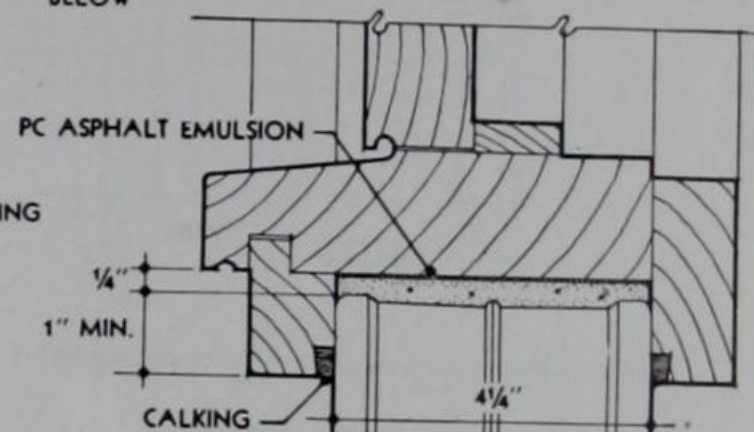
SCALE 3" = 1'-0"



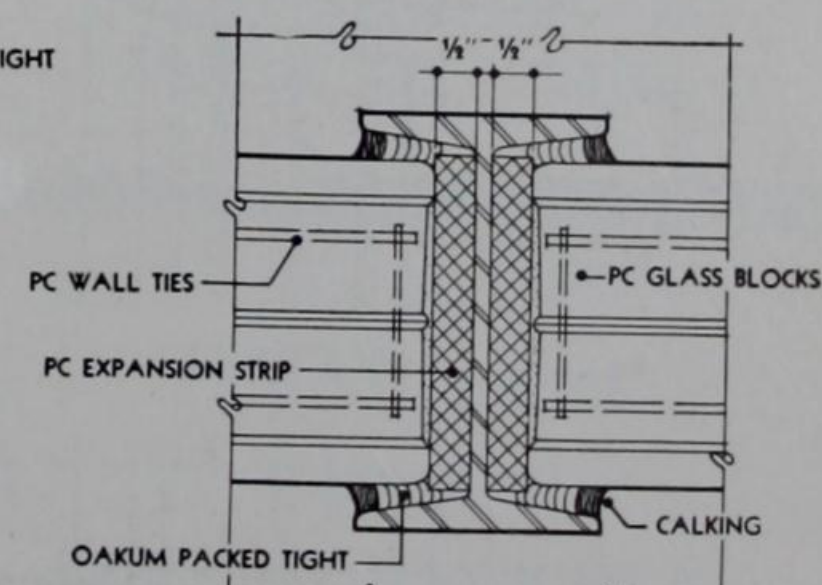
SECTION "H"



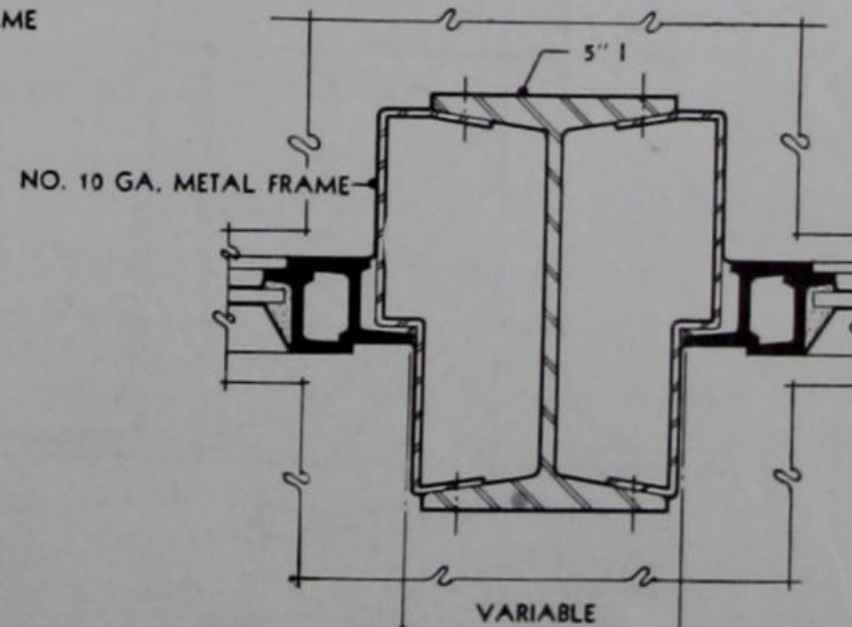
SECTION "L"



SECTION "J"



SECTION "R"



SECTION "S"

Storefronts

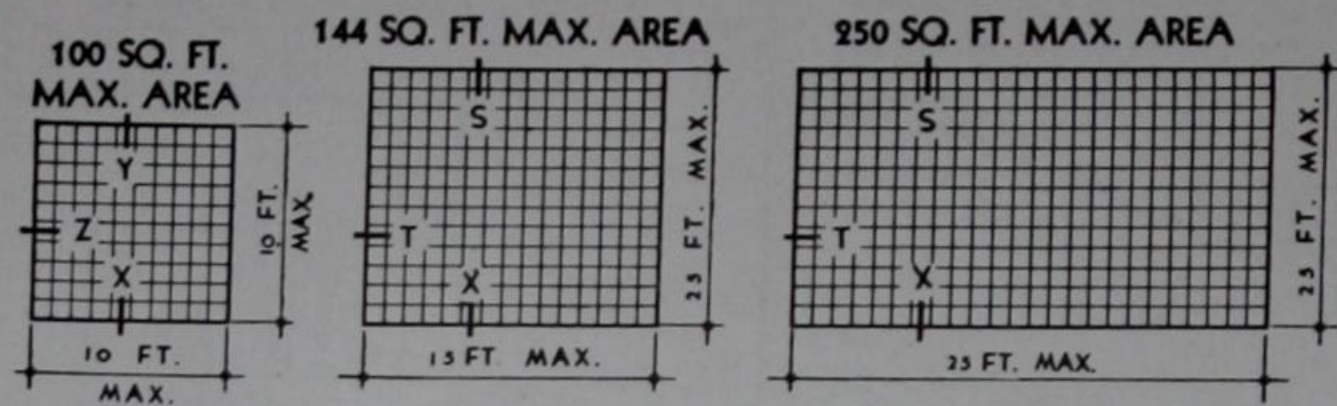
Art Glass

General Glass  
Catalogues

Miscellaneous



# INSTALLATION DETAILS— FOR INTERIOR PANELS

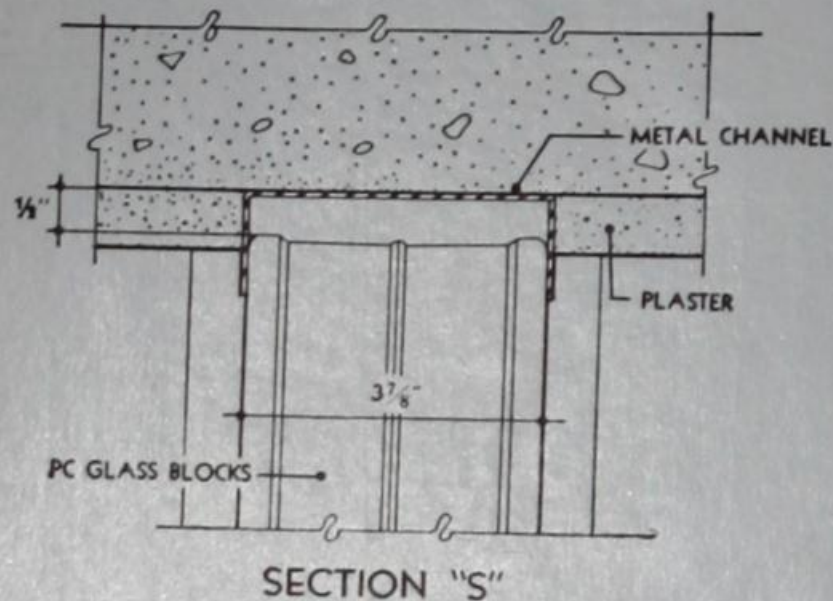


INTERIOR PANEL SIZE LIMITATIONS WITH  
MINIMUM EXPANSION & ANCHORAGE REQUIREMENTS

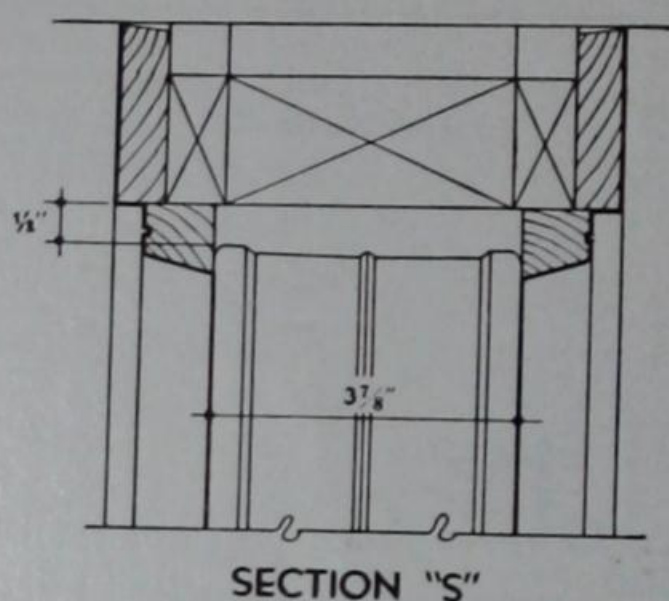
Construction supporting panels over 144 square feet in area must be of a type which will provide a minimum of movement and settlement.

Information shown on this sheet is not intended to conflict with any local building code requirements.

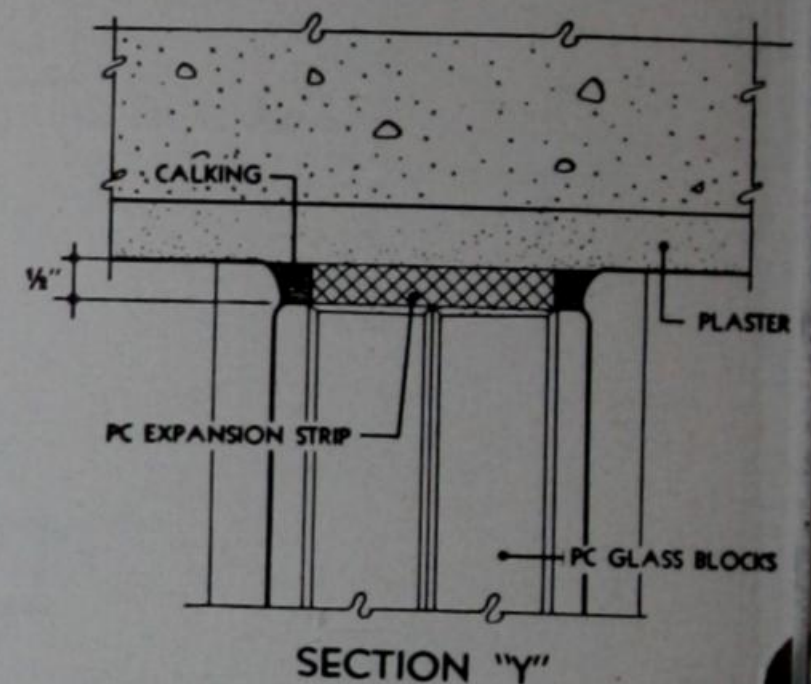
Before glass blocks are installed in wood partitions, all wood adjacent to mortar shall be properly primed.



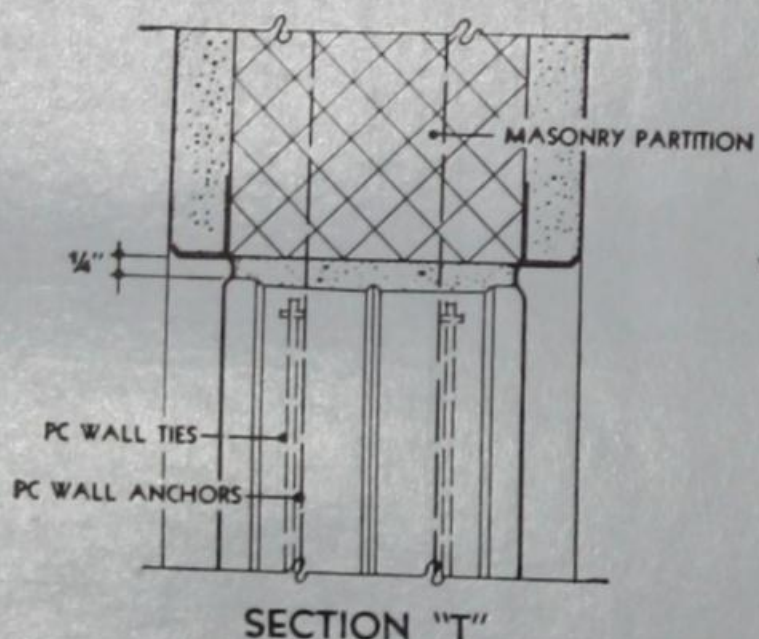
SECTION "S"



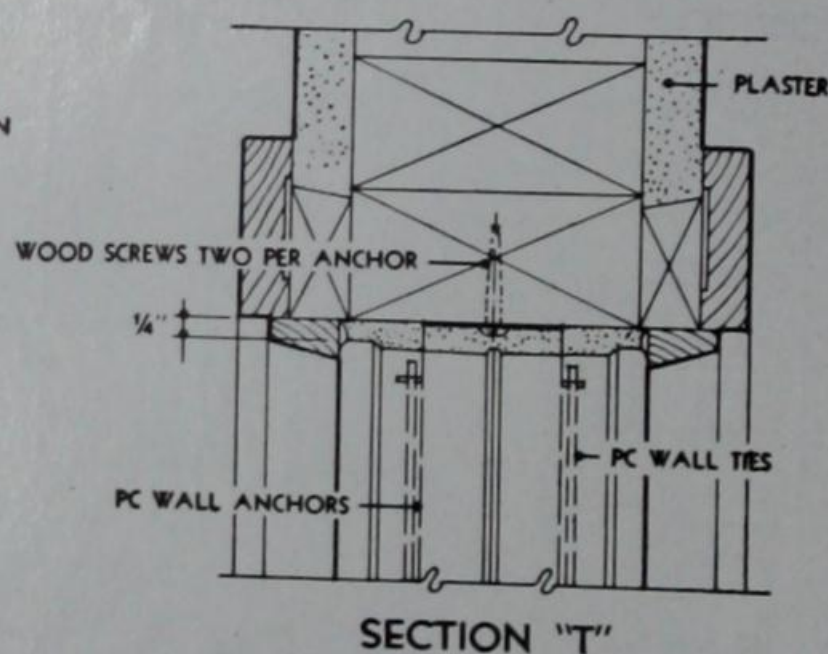
SECTION "S"



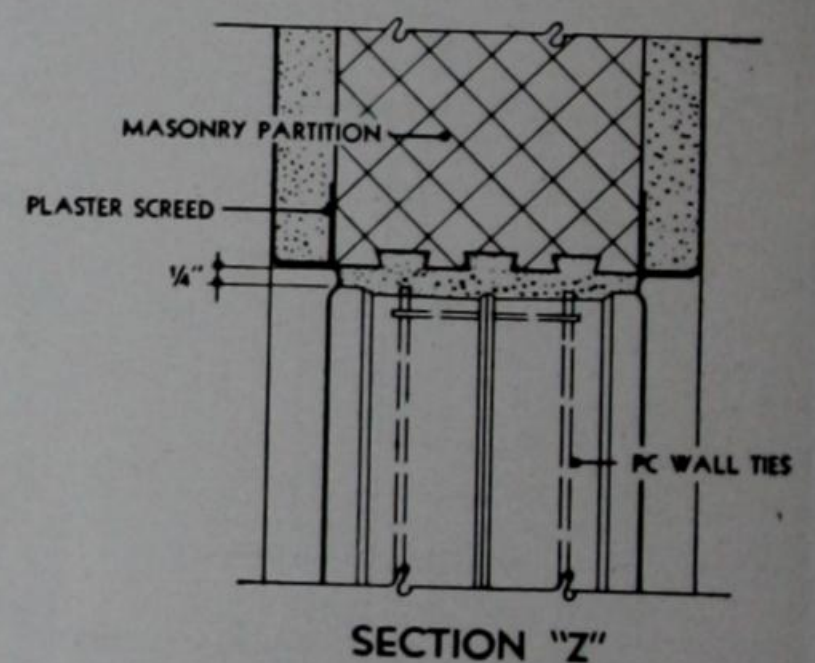
SECTION "Y"



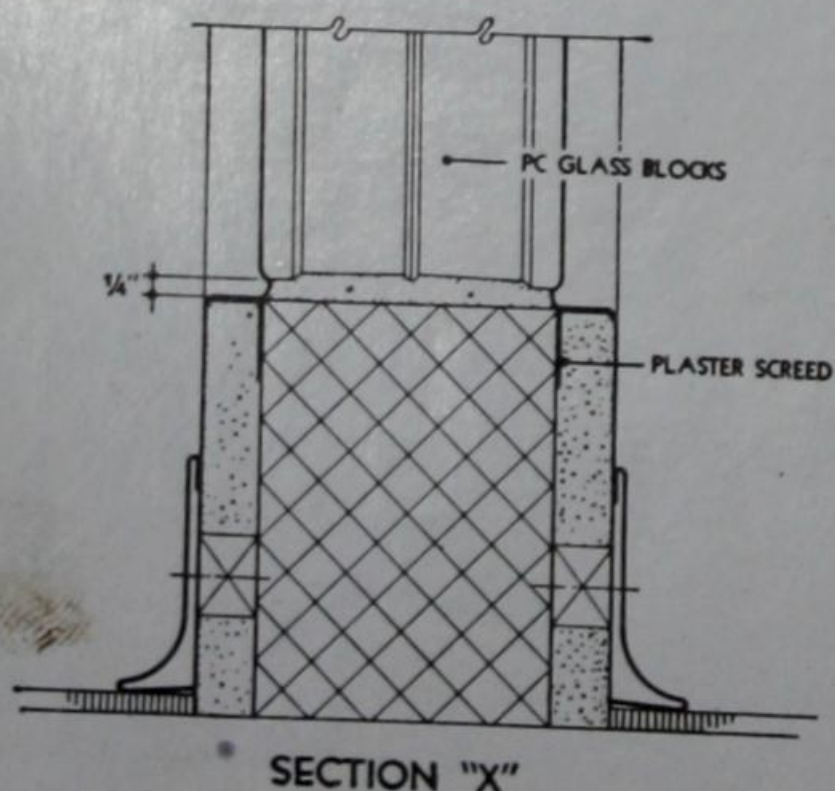
SECTION "T"



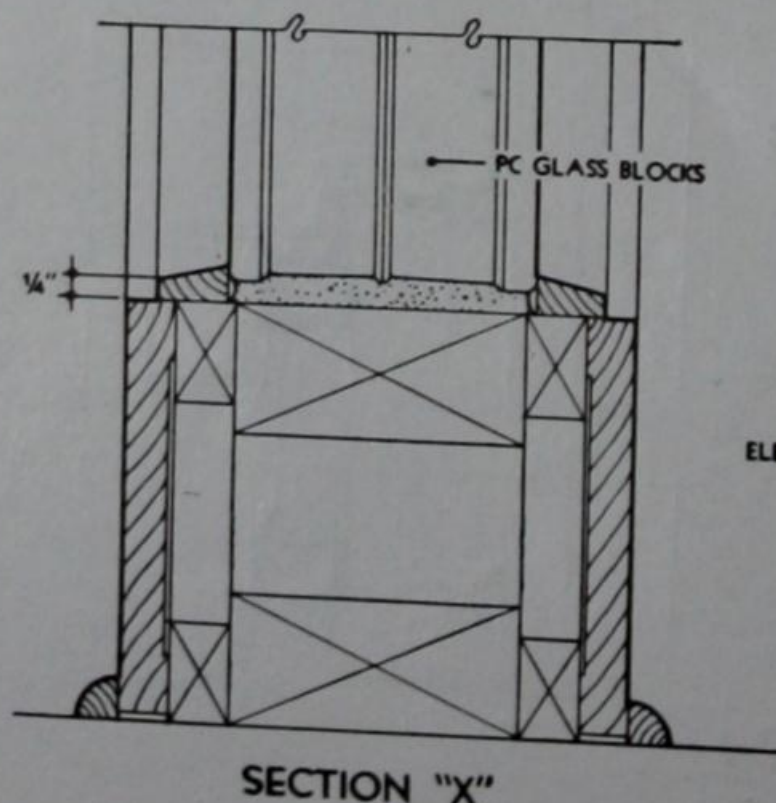
SECTION "T"



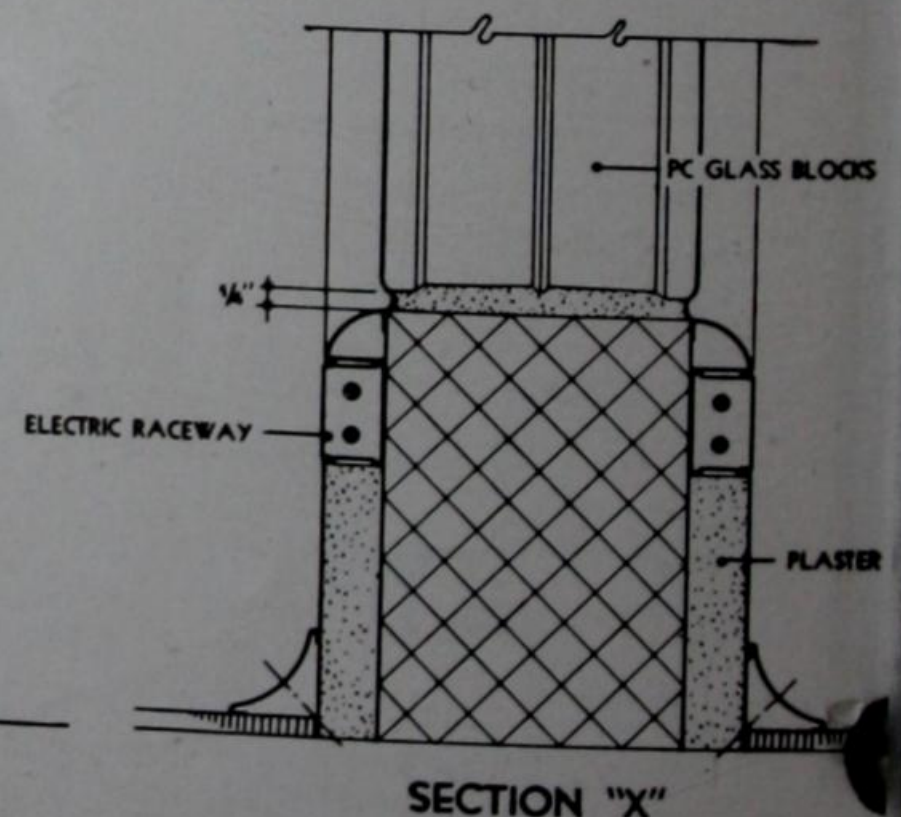
SECTION "Z"



SECTION "X"



SECTION "X"

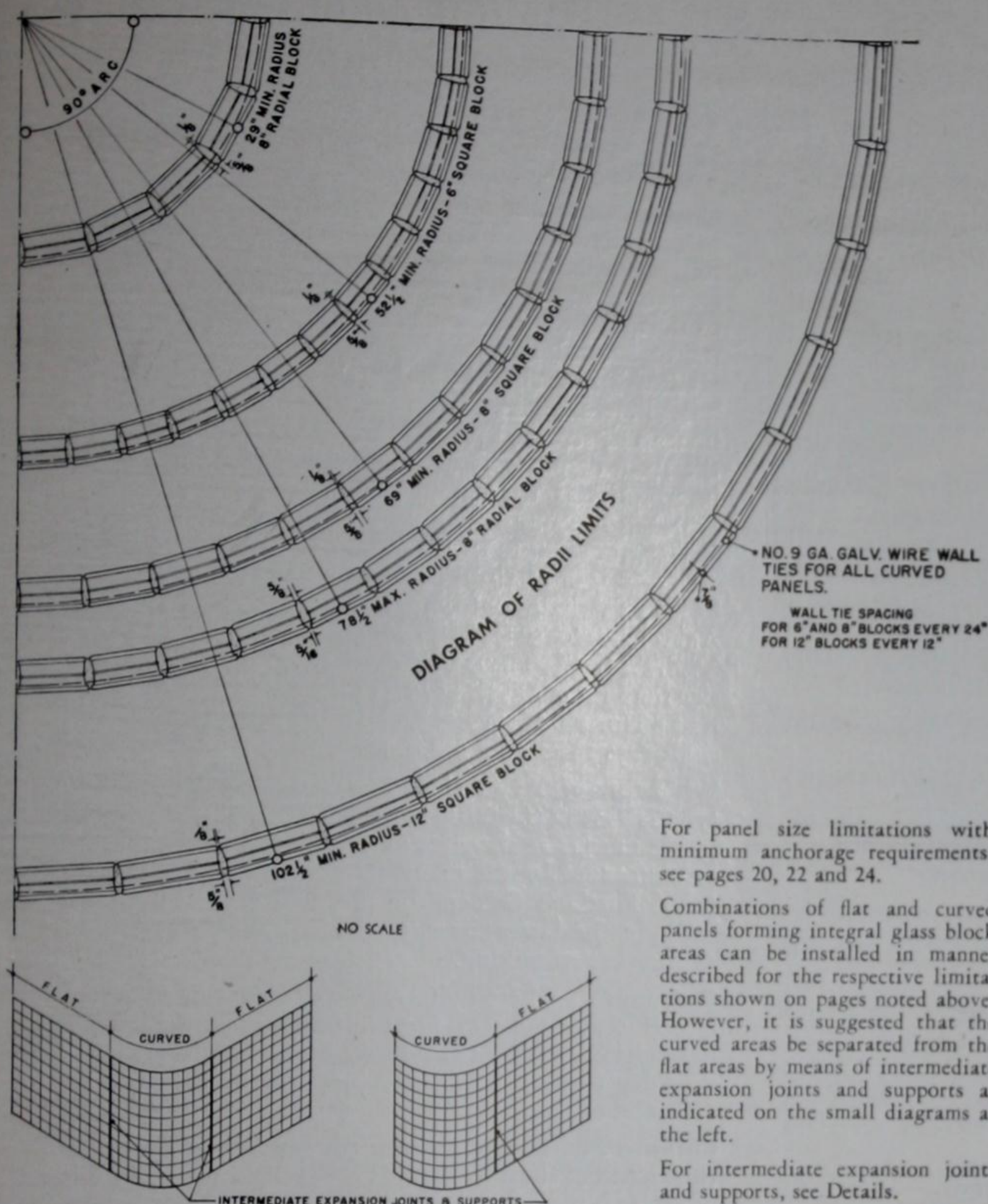


SECTION "X"

SCALE 3" = 1'-0"



# CURVED PANEL INSTALLATION REQUIREMENTS WITH TABLE OF RADII LIMITS



For panel size limitations with minimum anchorage requirements, see pages 20, 22 and 24.

Combinations of flat and curved panels forming integral glass block areas can be installed in manner described for the respective limitations shown on pages noted above. However, it is suggested that the curved areas be separated from the flat areas by means of intermediate expansion joints and supports as indicated on the small diagrams at the left.

For intermediate expansion joints and supports, see Details.

TABLE OF RADII LIMITS FOR CURVED PANELS

Outside Radius Inches	Number of Block in 90° Circular Arc	Joint Thickness in Inches		Remarks
		Inside	Outside	
6" SQUARE BLOCK				
52 1/2	13	3/8	3/8	Minimum
56 1/4	14	3/8	3/8	
56 3/4	14	3/8	3/8	
60	15	3/8	3/8	
61	15	3/8	3/8	
63 3/4	16	3/8	1/2	
65	16	1/4	3/8	
67 1/2	17	1/4	1/2	
69	17	1/4	3/8	
71 1/4	18	1/8	3/8	
73	18	3/8	3/8	

No Maximum Limitations.

8" SQUARE BLOCK				
69	13	3/8	3/8	Minimum
74	14	3/8	3/8	
74 3/4	14	3/8	3/8	
79	15	3/8	3/8	
80	15	3/8	3/8	
84	16	3/8	3/8	
85 1/4	16	3/8	3/8	

No Maximum Limitations.

8" RADIAL BLOCK				
29	5	3/8	3/8	Minimum
34	6	3/8	3/8	
34 3/4	6	3/8	3/8	
39	7	3/8	3/8	
40 3/4	7	3/8	3/8	
44	8	3/8	3/8	
46 1/2	8	3/8	3/8	
49 1/2	9	3/8	3/8	
51 3/4	9	3/8	3/8	
55	10	3/8	3/8	
57 1/4	10	3/8	3/8	Use Square Block for larger radii
60 1/2	11	3/8	3/8	
62 1/2	11	3/8	3/8	
66	12	3/8	3/8	
67 3/4	12	3/8	3/8	
71 1/2	13	3/8	3/8	
73 1/4	13	3/8	3/8	
76 3/4	14	3/8	3/8	
78 1/2	14	3/8	3/8	

12" SQUARE BLOCK				
102 1/2	13	3/8	3/8	Minimum

No Maximum Limitations.

NOTE: Radii given to closest quarter inch; joint thicknesses to closest sixteenth inch.

Guide No. 40 UM2.6.5. December 11, 1945 File R2556.

Pittsburgh Corning Corp., Mfr.,  
632 Duquesne Way, Pittsburgh 22, Pa.

Glass Blocks.

For window openings not exceeding 120 sq ft in area, nor 12 ft in width or height, subject to light fire exposure (Class F openings).

Argus, Argus Parallel, Bristol, Druid, Decora, Essex, and Saxon PC hollow glass blocks, nominally 7-3/4 by 7-3/4 by 3-3/8 in., and Argus, Argus Parallel, Decora, and Saxon 5-3/4 by 5-3/4 in. face dimensions, 3-3/8 in. thick; laid with 1/4-in. horizontal and vertical mortar joints; mortar consisting of one part portland cement, one part hydrated lime, and four parts No. 1 screened torpedo sand by volume; each horizontal joint except between the two top rows reinforced for full length with No. 9 and 14 Bwg galvanized wire mesh; the glass block panels extending 1-1/4 in. into grooves 2-1/4 in. deep in jambs and lintel of the masonry openings, with glass or mineral wool in the remaining spaces in the grooves, to provide for expansion of the glass panels; exterior jamb and lintel edges caulked with waterproofing mastic.

Marking: Letters "PC", pattern designation, size and manufacturer's name on container.

Listed—Reexamination Service.

See description of Reexamination Service on guide card.

Authorities having jurisdiction should be consulted before installation.

This card replaces R2556 dated Jan. 2, 1941.

This card is issued by Underwriters' Laboratories, Inc.

PC GLASS BLOCKS

Approved by

Underwriters' Laboratories, Inc.

NOTE: For information regarding details of chase construction required, consult the Pittsburgh Corning Corporation, 632 Duquesne Way, Pittsburgh, Pa., or your nearest branch of the Pittsburgh Plate Glass Company.

PC GLASS BLOCKS APPROVED  
BY BUILDING CODE AUTHORITIES

Building Code Authorities throughout the country have accepted and approved the use of PC Glass Blocks as a building material of adequate strength for non-load-bearing construction when installed according to the manufacturer's directions.

Storefronts

Art Glass

General Glass Catalogues

Miscellaneous



# PC Glass Blocks — CLOSED SPECIFICATIONS

**GENERAL CONDITIONS:** The "General Conditions" of the contract are a part of these specifications.

**SCOPE OF THE WORK:** This contractor shall furnish all labor and materials to install all glass blocks where shown on the drawings or specified hereinunder. This shall include the furnishing and installation of all expansion joint strips, oakum packing, felts, wall ties, wall anchors, calking, asphalt emulsion, and other labor and materials necessary for a complete installation. This contract does not include the preparation of the structure to receive the glass block panels, such as chases, stiffeners, etc., except as hereinafter specified.

**MATERIALS:** Glass Blocks . . . shall be hollow, partially evacuated, clear, colorless glass units as manufactured by the Pittsburgh Corning Corporation. Units shall be "all glass," formed of two halves fused together at a high temperature. Edges shall be so formed as to provide a "key-lock" mortar joint. All blocks shall be coated on the edges with a grit-bearing, water-and-alkaline-resistant plastic material.

**Patterns — Sizes — Shapes . . .** shall be as shown on the drawings or as specified hereinunder:

(Indicate PC patterns, sizes and shapes, and locations)

**Expansion Joint Materials . . .** where shown or required, shall be PC Expansion Strips as furnished by Pittsburgh Corning Corporation.

**Asphalt Emulsion . . .** where shown or required, shall be PC Asphalt Emulsion as furnished by Pittsburgh Corning Corporation.

**Wall Ties . . .** shall be PC Wall Ties of steel double wire mesh formed of two parallel wires (No. 9 gage) 2" on centers with electrically welded cross wires (No. 14 gage) at regular intervals, and shall be galvanized. Wall ties shall be installed in horizontal mortar joints of all glass block panels as follows:

For  $5\frac{3}{4}$ " size blocks — Every four courses.

For  $7\frac{3}{4}$ " size blocks — Every three courses.

For  $11\frac{3}{4}$ " size blocks — Every course.

Wall ties shall run continuously with ends lapped not less than 6 in. and shall run from end to end of panel. Wall ties shall not bridge expansion joints.

**Wall Anchors . . .** where shown on drawings shall be PC Wall Anchors as furnished by the Pittsburgh Corning Corporation and shall be No. 20 gage perforated steel strips 24 in. long by  $1\frac{3}{4}$  in. wide galvanized after perforating. All wall anchors must be crimped within expansion joints, and shall generally be placed in the same joint as wall ties and must be completely embedded in the mortar joint of the glass block panels.

**Mortar . . .** shall be one (1) part Portland Cement, one (1) part lime, and four (4) to six (6) parts sand all measured by dry volumes, and *integral type waterproofer*, mixed to a consistency as stiff as will permit good working and shall be drier than for ordinary clay brickwork. For interior panels the waterproofer may be omitted. Admixtures in the form of setting accelerators and anti-freeze compounds shall not be used.

NOTE: At the discretion of the architect or engineer, a mortar prepared from masonry cement of low volume change, incorporating metallic stearate type waterproofer, and mixed in accordance with manufacturer's recommendation may be specified as an alternate.

**Cement . . .** shall be Type I conforming to the Standard Specifications for Portland Cement (A.S.T.M. Designation: C150-44).

**Lime . . .** shall be a high-calcium type\* hydrated lime or masons' hydrate conforming to the Standard Specifications for Hydrated Lime for Structural Purposes (A.S.T.M. Designation: C6-44); or a well-slacked quicklime putty conforming to the Standard Specifications for quicklime for Structural Purposes (A.S.T.M. Designation: C5-26). Hydrated lime shall be soaked at least two (2) hours, and quicklime shall be slaked not less than forty-eight (48) hours and screened prior to use in mortar. Where lime in the form of putty is used, the amount specified shall be interpreted as the actual volume of putty.

\*NOTE: Hydrated lime of the magnesia or dolomitic type may be used provided that not less than 92% of all active ingredients are completely hydrated.

**Sand . . .** shall conform with Standard Specifications for Aggregate for Masonry Mortar, Intermediate Grading (A.S.T.M. C144-44), but shall contain particles of such size that not more than twelve (12) per cent by weight shall pass a No. 100 mesh sieve, and one hundred (100) per cent shall pass through a No. 8 mesh sieve, as defined therein.

**Waterproofer . . .** shall be Pittsburgh Plate Glass Co. type NV-3389 (metallic stearate type). It shall be added to the mortar at the time of mixing and in the proportion recommended by the manufacturer, except where a waterproof Portland Cement or prepared masonry mortar is used. In the latter cases, no waterproofer shall be added at the time of mixing.

**Oakum . . .** where indicated on drawings or required for lateral cushioning of glass block panels at jambs and head chases, shall be of non-staining type treated to prevent dry rot, and shall be subject to the approval of the architect or engineer.

**Calking . . .** mastic calking compounds as approved by the architect shall be applied evenly and to the full depth of recess provided at both interior and exterior perimeters of all glass block panels.

**FLASHINGS:** Unless otherwise specified, contractor shall furnish and install in locations shown or where required, flashings as are necessary to provide a complete installation.

**INSTALLATION:** Sills shall be heavily coated with asphalt emulsion which shall be allowed to dry for at least two hours before mortar is placed. Expansion joint strips shall be adhered to the jambs and head with asphalt emulsion, and shall run continuously in the expansion space, and must rest directly on the sill.

All mortar joints must be completely filled with mortar and *shall not be furrowed*. Mortar must not bridge across expansion joints. Blocks shall be laid up plumb, true to line, and with one-quarter ( $\frac{1}{4}$ ) in.\* visible width mortar joints. While mortar is still plastic and before final set, the joints shall be compressed to a depth necessary to expose the corners of the blocks as sharp, clean lines, and joints shall immediately be tooled slightly concave and smooth. The number of courses of glass blocks laid in successive lifts shall be limited to prevent compaction of joints.

\*Unless otherwise specified.

**CLEANING:** While mortar is still plastic and before final set, this contractor shall clean off all mortar and foreign material from the glass block surfaces. Final cleaning shall be done by others, after mortar has reached its final set.



# Why it Pays to Specify

## PC GLASS BLOCKS



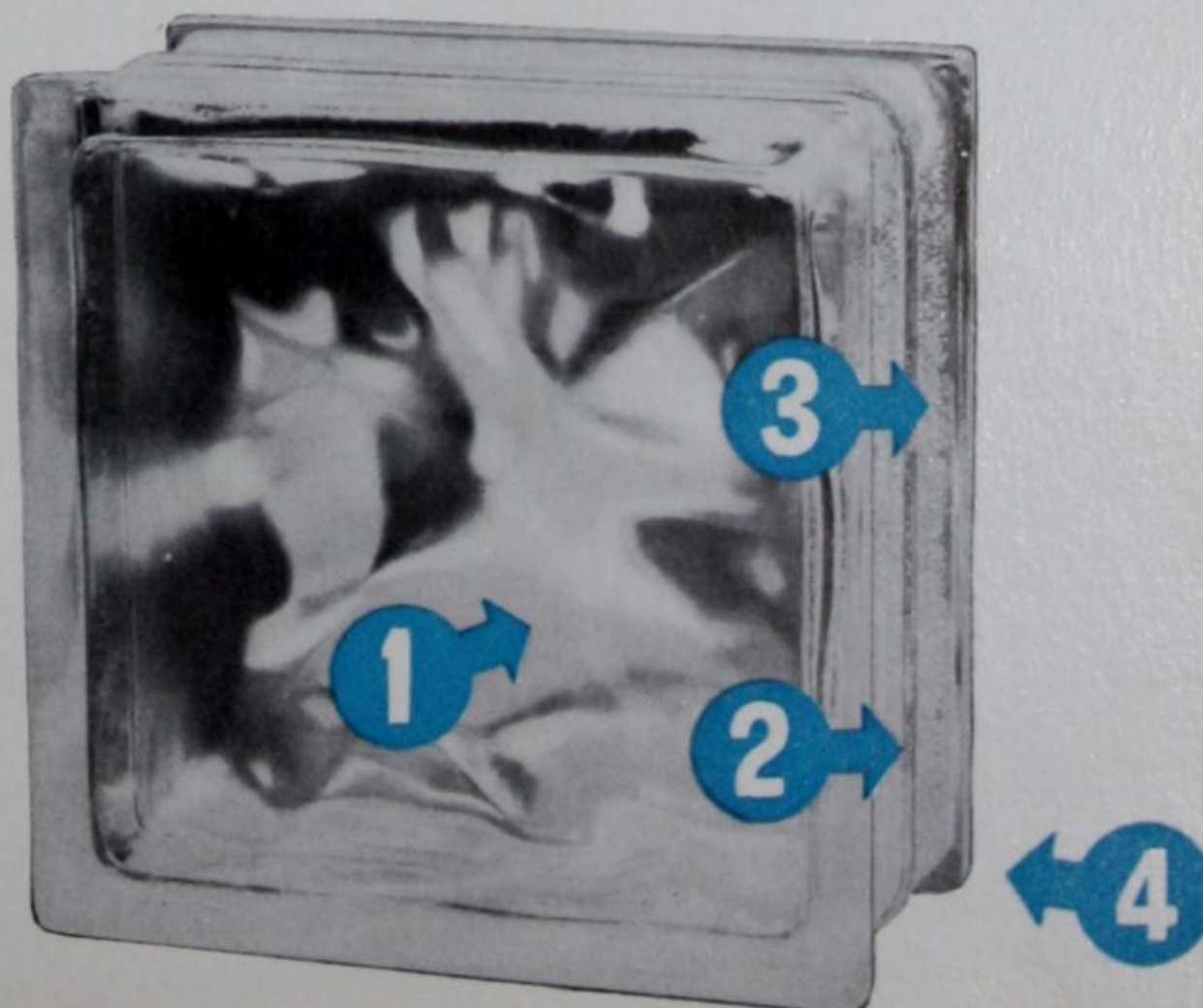
**1.** PC Glass Blocks are made of clear, colorless glass of proven durability. The light which streams through them is of full daylight tone, requiring no special consideration in the matching of colors, either for decoration or production uniformity.

**2.** PC Glass Blocks are hollow "all glass" units with fused seals made at high temperatures, relatively free of entrapped water vapor. This feature was developed by our engineers so that PC Glass Blocks will remain tightly sealed. Because of this method of "all glass" construction, the seal has the same coefficient of expansion as the block itself. The joint is as strong as any other part of the block. This tight seal insures a dry, dead-air space within the block which is so important to efficient heat insulation.

**3.** PC Glass Blocks have all-glass mortar edges with grit-bearing water-and-alkaline-resistant plastic coating. This forms a permanent bond between glass and mortar, which insures a high degree of wind resistance and weather-tightness. As is the case with all masonry, voids in mortar joints are a chief cause of leaky walls. The mason can prevent this trouble by using care in completely filling all mortar joints.

**4.** PC Glass Block edge construction forms a "key-lock" mortar joint, providing a full bed of mortar, yet permitting a visible joint of only about  $\frac{1}{4}$  inch, resulting in a trim panel that is pleasing to the eye. And this "key-lock" joint is easier to handle in laying.

These are all features that assure consumer satisfaction. Better color — neater appearance in panels — greater durability — all are important. All of them guard the investment of the final consumer — and the reputation of those who have recommended and installed the material.





# PC Glass Blocks

Manufactured by

PITTSBURGH CORNING CORPORATION

632 Duquesne Way

PITTSBURGH 22, PA.

*Sold in Canada by*

## HOBBS GLASS LIMITED

MONCTON

WINDSOR

QUEBEC

FT. WILLIAM

MONTREAL

WINNIPEG

OTTAWA

REGINA

TORONTO

MOOSE JAW

HAMILTON

SASKATOON

BRANTFORD

VICTORIA

LONDON

VANCOUVER





**More DAYLIGHT,**

**PRIVACY,**

**and COMFORT**

*For* ***YOUR HOME***

COPYRIGHT 1941, PITTSBURGH CORNING CORPORATION

Storefronts

Art Glass

General Glass  
Catalogues

Miscellaneous





# GLASS BLOCKS

*Manufactured by*

PITTSBURGH CORNING CORPORATION  
GRANT BLDG. PITTSBURGH

Sold in Canada by

HOBBS GLASS LIMITED

MONCTON

WINDSOR

QUEBEC

FT. WILLIAM

MONTREAL

WINNIPEG

OTTAWA

REGINA

TORONTO

MOOSE JAW

HAMILTON

SASKATOON

BRANTFORD

VICTORIA

LONDON

VANCOUVER



# how **EYE-APPEAL** increases retail sales

tail selling, appearances count more  
Thousands of merchants all  
learned by actual personal  
with a modern, indi-  
that draws more  
le, has a higher  
more reg-  
ore

Storefronts

Art Glass

General Glass  
Catalogues

Miscellaneous







# GLASS BLOCK

*Manufactured by*

PITTSBURGH CORNING  
GRANT BLDG.





## how **EYE-APPEAL** increases retail sales

Today, in retail selling, appearances count more than ever before. Thousands of merchants all over the country have learned by actual personal experience that the store with a modern, individualized front is the one that draws more business, a better class of clientele, has a higher unit sale and brings in bigger profits more regularly and steadily.

Pittsburgh Glass Products and Pittco Store Front Metal make possible store fronts that are truly individual. All these products are specifically designed to be used in conjunction with each other to give a store eye-appeal. A Pittsburgh Store Front invites the trade that brings you profit. It lures business your way and helps you to keep the business you already have.

When you are ready to modernize your store, the Pittsburgh Plate Glass Company recommends that you consult an architect. Our own experts will be glad to cooperate with him, and with you. And if you desire it, convenient terms can be arranged through the Pittsburgh Time Payment Plan.







# THEATRE

**LOCATION:** Braddock, Pa.

**ARCHITECT:** Samuel Barbalat

**PRODUCTS USED:** Gray, Black, Ivory and Orange Carrara Structural Glass; Pittsburgh Polished Plate Glass; Pittco Store Front Metal.



After



# MANDL'S



## FLORIST SHOP

**LOCATION:** Oklahoma City, Okla.

**DESIGNER:** R. J. Bennett Beistle

**PRODUCTS USED:** Black and Gray Carrara Structural Glass; Pittsburgh Polished Plate Glass; Pittco Store Front Metal.

The owner of this attractive shop writes, "Since installing your store front, our business has greatly increased."



Before

## BAKERY

**LOCATION:** Avalon, Pa.

**ARCHITECT:** F. H. Floyd.

**PRODUCTS USED:** Black and Ivory Carrara Structural Glass; Pittsburgh Polished Plate Glass; Pittco Store Front Metal.

The owner writes, "We are very proud of our new store front, and we still can't realize that it was possible to change such an old front as ours was into the beautiful and striking front it now is."



**P  
G**  
**FRONTS**

# SHOE STORE

**LOCATION:** Louisville, Ky.

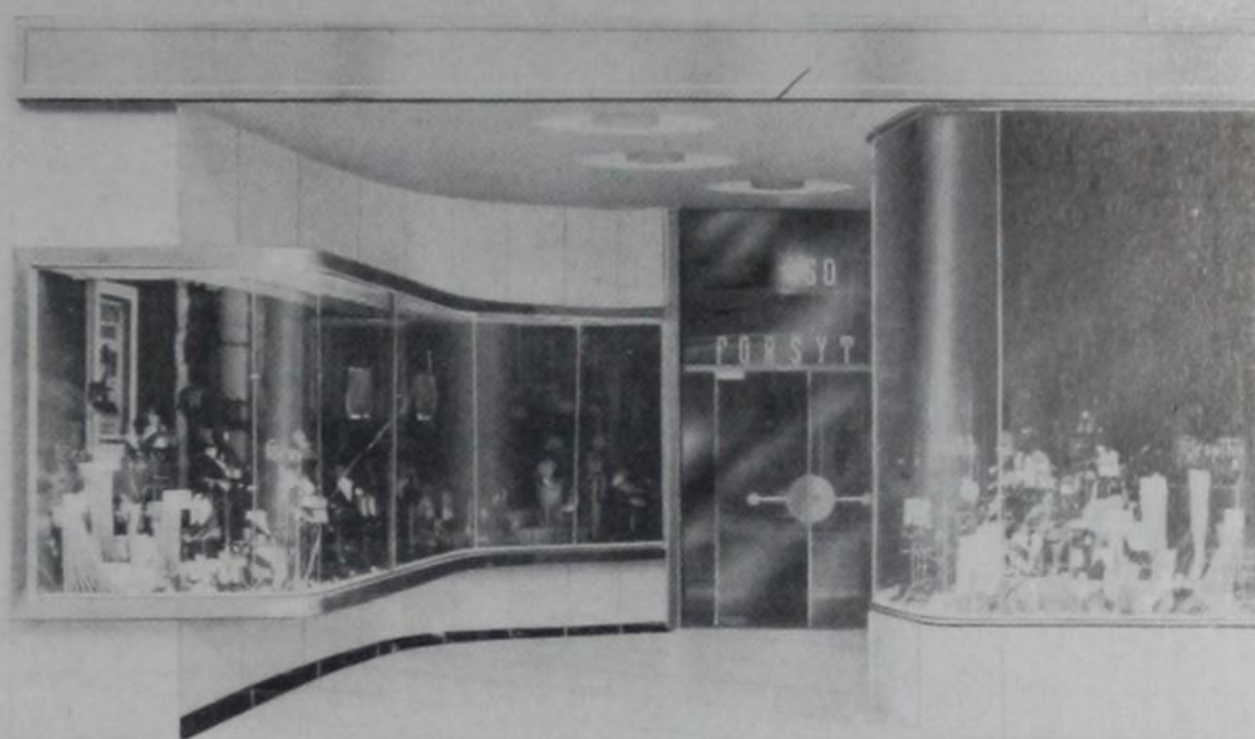
**ARCHITECT:** Morris Lapidus

**PRODUCTS USED:** Gray Carrara Structural Glass; Pittsburgh Polished Plate Glass; Herculite Tempered Plate Glass; Pittco Store Front Metal.

"We are quite pleased with our store front in Louisville," wrote an official of the Company, shortly after the front was installed, "and have had many favorable comments on its appearance. The Herculite Doors, of course, make it possible to get a clear view of our complete interior . . ."

# FORSYTHE

*shoes*



After

*Baptist*  
*Book St.*



# BOOK STORE

**LOCATION:** Oklahoma City, Okla.

**ARCHITECT:** G. Daniel Rue

**PRODUCTS USED:** Black and Ivory Carrara Structural Glass; Pittsburgh Polished Plate Glass.

The year after the new store front was installed, the manager of this book store reported that sales increased 19%.



Before

# NEVINS



# DRUG STORE

**LOCATION:** Philadelphia, Pa.

**ARCHITECTS:** Thalheimer & Weitz

**PRODUCTS USED:** Gray and Ivory Carrara Structural Glass; Pittsburgh Polished Plate Glass; Herculite Tempered Plate Glass; Pittsburgh Mirrors; Pittco Store Front Metal.

"We are entirely pleased with our front, and we have found that our business has improved considerably as a result of it," writes the manager. "The front is a splendid one and exceeds our expectations as to appearance and pulling power."

Art Glass

General Glass  
Catalogues

Miscellaneous



# PRODUCTS FOR STORE FRONTS

made by  
**Pittsburgh Plate Glass Company  
and Pittsburgh Corning Corporation**

## **CARRARA STRUCTURAL GLASS**

Here is a material which combines beauty, versatility, sanitation, permanence, and reasonable cost. Carrara Structural Glass is available in ten colors which are genuinely distinctive, designed to harmonize with almost any color scheme. Carrara is made to withstand rigorous use inside and out. It will not check, craze, stain, fade nor absorb odors and is impervious to water, chemicals, and pencil marks.

## **POLISHED PLATE GLASS**

Pittsburgh Polished Plate Glass should be used wherever clarity of vision, beauty, and dignity are desired. It imparts to buildings in which it is used a brilliance and luster, a distinction and charm, that enhance their appearance and add immeasurably to their attractiveness. Also available are Blue, Flesh Tinted, Green and Water White Plate Glass—ideal for scores of uses.

## **HERCULITE DOORS**

A special tempering process makes Herculite Glass four to five times as strong as regular Plate Glass of equal thickness, and many times more resistant to impact and shock. Yet all the beauty of Pittsburgh Polished Plate Glass is retained. Doors made of Herculite enhance the attractiveness of store fronts and permit vision into the interior of the store.

## **PITTSBURGH MIRRORS**

You will find Pittsburgh Mirrors distinguished by their beauty, their unusually true reflections, and their long life. Used in stores they give added light and cheerfulness. You can attain original effects with Pittsburgh Mirrors fabricated from Flesh Tinted, Blue, Solex (green) and Crystalex (water white) Plate Glass, in addition to Plate Glass in its regular color.

## **PITTCO STORE FRONT METAL**

The two lines of Pittco Store Front Metal—Pittco DeLuxe and Pittco Premier—are outstanding in the field. They are designed finely, in the modern manner. They are simple and easy to install; yet they have dignified beauty and appeal. A wide variety of sash, bars, and mouldings is available for the creation of striking store fronts.

## **PC GLASS BLOCKS**

Durable and sturdy, PC Glass Blocks for windows, panels and numerous decorative purposes are made of clear, colorless, all-glass units that have been permanently fused together. They are available in several distinctive patterns, any one of which may be adapted to a store design to increase its originality and appeal. The maintenance cost of PC Glass Blocks is practically non-existent.

*"PITTSBURGH" stands for Quality Glass and Paint*



**PITTSBURGH PLATE GLASS COMPANY**

Grant Building • Pittsburgh 19, Pa.



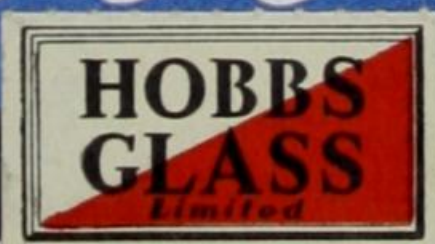
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C H I N A G L A S S



atrata



STRUCTURAL GLASS

Paint · PITTSBURGH · Glass  
PLATE GLASS COMPANY

Art Glass

General Glass  
Catalogues

Miscellaneous



## 8 STANDARD *Carrara* COLORS

White— $\frac{11}{32}$ ,  $\frac{7}{16}$ ,  $\frac{3}{4}$ ,  $\frac{7}{8}$ ,  $1\frac{1}{4}$  In.

Ivory— $\frac{11}{32}$ ,  $\frac{7}{16}$ ,  $\frac{3}{4}$ ,  $\frac{7}{8}$ ,  $1\frac{1}{4}$  In.

Beige— $\frac{11}{32}$  In. Only

Tranquil Green— $\frac{11}{32}$ ,  $\frac{7}{16}$ ,  $\frac{3}{4}$ ,  $\frac{7}{8}$ ,  $1\frac{1}{4}$  In.

Forest Green— $\frac{11}{32}$  In. Only

Gray— $\frac{11}{32}$ ,  $\frac{7}{16}$ ,  $\frac{3}{4}$ ,  $\frac{7}{8}$ ,  $1\frac{1}{4}$  In.

Black— $\frac{1}{4}$ ,  $\frac{11}{32}$ ,  $\frac{7}{16}$ ,  $\frac{3}{4}$ ,  $\frac{7}{8}$ ,  $1\frac{1}{4}$  In.

Rembrandt Blue— $\frac{11}{32}$  In. Only

## 2 *Carrara* TRIM COLORS

Orange— $\frac{7}{16}$  In. Only

Wine— $\frac{11}{32}$  In. Only

# WHAT *Carrara* IS . . .

*Carrara* Structural Glass is a material which successfully combines beauty, versatility, sanitation, permanence and reasonable cost. It is a glass which is mechanically ground and polished to a true, flat surface. It brings to the architect soft, rich colors that are genuinely distinctive, and designed to harmonize with almost any color scheme. (See color chips at left.) *Carrara* is strong and durable, made to withstand rigorous use indoors and out. It will not absorb odors of any kind. It is impervious to grease, grime, moisture, chemicals and pencil marks. It can easily be kept clean by an occasional wiping with a damp cloth. It retains its original beauty year after year, never fading or staining. It is easy to install. And it is adaptable to so many different kinds of treatment that it offers the architect unlimited opportunities for design.

**FINISHES** *Carrara* Structural Glass is available in two finishes: (1) Polished . . . which is a brilliant, reflective, plate glass finish. And (2) Suede . . . which is a softer, less reflective finish, mechanically imparted, and which is available in  $\frac{11}{32}$  in. thickness and trim colors only.

**DECORATION** *Carrara* can be beautifully decorated to suit individual tastes. It can be carved or fluted. It can be sand-blasted with any design desired, bringing the pattern out either in shallow or deep relief. These designs may be further enriched by the application of gold, silver or colors.

**LAMINATED *Carrara*** *Carrara* can be laminated by heat and pressure at the factory, assuring a permanent joint, and this laminated *Carrara* is then handled and set like a single slab. The laminated slab forms the finest type of toilet partitions. By lamination, many original effects may be obtained, such as the combination of two different colors, the building up of *Carrara* pilasters with reveals and offsets, etc.

**USES** *Carrara* is especially suitable for use in toilet room walls, stiles and partitions; in bathroom and kitchen walls in residences; for the walls of operating rooms and x-ray rooms in hospitals and clinics; for use as a facia material in store fronts; for scores of decorative purposes in building lobbies, corridors, waiting rooms, restaurants, hotels, bars and stores; for table tops and counter tops; for niche linings, sill covers, lintels, door and window trim, and kindred uses.

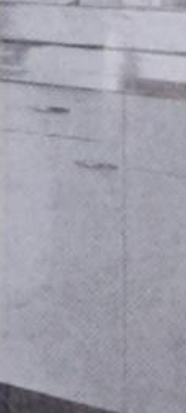
$\frac{11}{32}$	$\frac{7}{16}$	$\frac{3}{4}$	$\frac{7}{8}$	$1\frac{1}{4}$
( $\frac{11}{32}$ In.) 4.5 lb. sq. ft.	( $\frac{7}{16}$ In.) 5.76 lb. sq. ft.	( $\frac{3}{4}$ In.) 9.87 lb. sq. ft.	( $\frac{7}{8}$ In.) 11.51 lb. sq. ft.	( $1\frac{1}{4}$ In.) 16.45 lb. sq. ft.

## THICKNESS RECOMMENDED

Ceiling . . . . .	$\frac{11}{32}$ in.	Partitions . . . . .	$\frac{7}{8}$ in.
Wainscot, Ashlar . . . . .	$\frac{11}{32}$ in.	Door and Window Trim . . . . .	$\frac{7}{8}$ in.
Cap . . . . .	$\frac{7}{16}$ in.	Deal Plates . . . . .	$\frac{7}{8}$ in.
Base . . . . .	$\frac{7}{16}$ in.	Counter Tops . . . . .	$1\frac{1}{4}$ in.
Store Fronts . . . . .	$\frac{11}{32}$ in.	Lintel . . . . .	$1\frac{1}{4}$ in.
Wainscot, Panel . . . . .	$\frac{7}{16}$ in.	Stiles . . . . .	$1\frac{1}{4}$ in.
Bulkheads . . . . .	$\frac{7}{16}$ in.	Shower Seat . . . . .	$1\frac{1}{4}$ in.

**HOW *Carrara* IS INSTALLED** *Carrara* is easy to install. It is handled similarly to marble. To insure installations being made according to our standards, we maintain our own crews of workmen. *Carrara* may be installed over any hard, firm wall surface, but an allowance should be made for a space of  $\frac{3}{8}$  in. behind the glass for setting.





Art Class

General Class  
Catalogues

Miscellaneous







Carrara is installed by means of a plastic cement, which bonds permanently with the glass and the wall—yet allows for settling, shrinkage and expansion.

We provide all hardware necessary for the erection of our material, and will have the slabs drilled for any hardware or fixtures which we do not supply, such as hinges, strikes, etc., provided we are furnished their location and dimensions, so that the drilling may be done at the factory.

Carrara is also available as Ready-Built Carrara panels for installation in bathtub recesses and as kitchen stove backing. These panels are prefabricated in the factory, and consist of Carrara panels mounted on plasterboard. On certain edges, the plasterboard extends beyond the edge of the Carrara Glass, and thus provides a flange which is nailed directly to studding.

## USED WITH *Pittco* STORE FRONTS

Carrara Structural Glass has been widely used for the construction of modern glass store fronts in connection with Pittco Store Front Metal. The variety of attractive colors, the easy cleaning, the imperviousness and the extreme versatility of the material, combined with the many possibilities for effective decoration, make it ideal for store front use. For information and details of use with Pittco Store Front Metal, see Pittsburgh Plate Glass Company's Pittco Store Front Metal catalog in Sweet's.

## SUGGESTED SPECIFICATIONS

This contractor is to furnish all labor, material and service necessary for properly installing all Structural Glass as indicated on the drawings.

Contractor shall verify all dimensions at building, prepare shop drawings and furnish the architect with three sets of prints for approval. Doors, equipment and all hardware not necessary for erection of Structural Glass will be furnished and installed by other contractors. Other contractors will prepare walls, furnish and set wood grounds—also wood blocks for fixtures.

All Structural Glass shall be Carrara as made by the PITTSBURGH PLATE GLASS COMPANY of size and thickness indicated on drawings. Finish of face of glass to be polished and/or Suede, exposed edges polished.

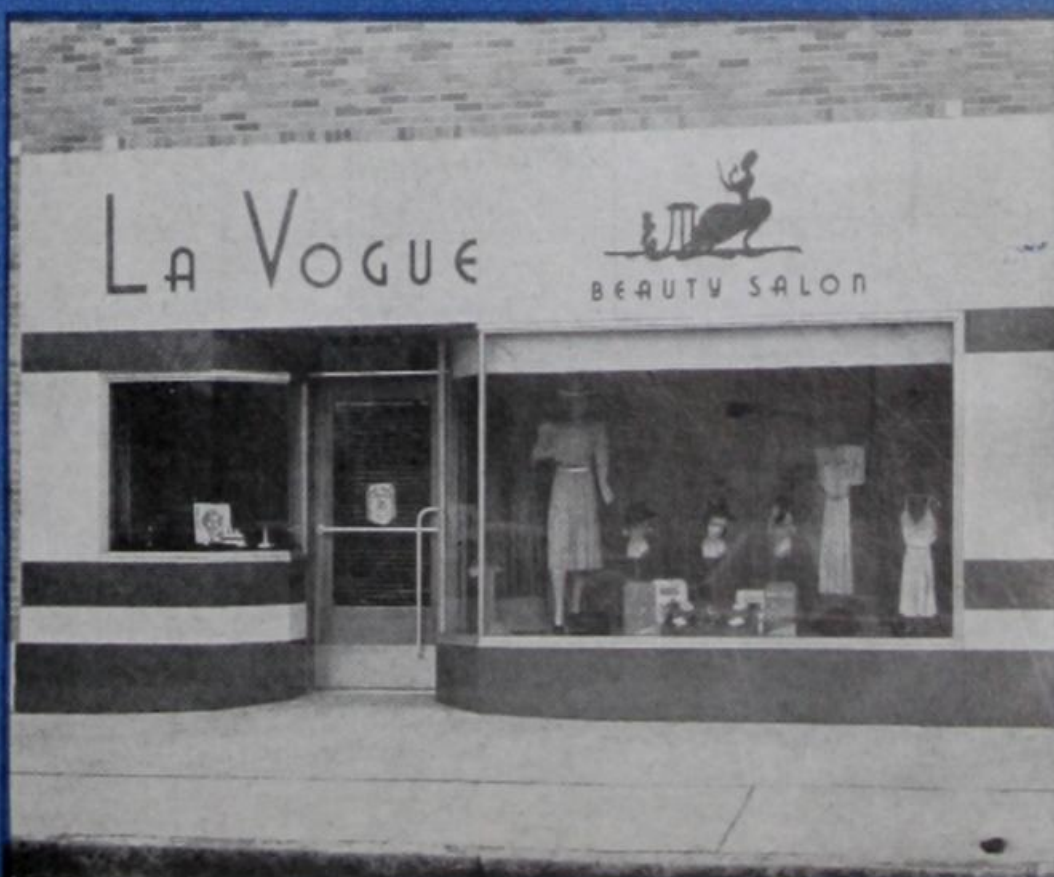
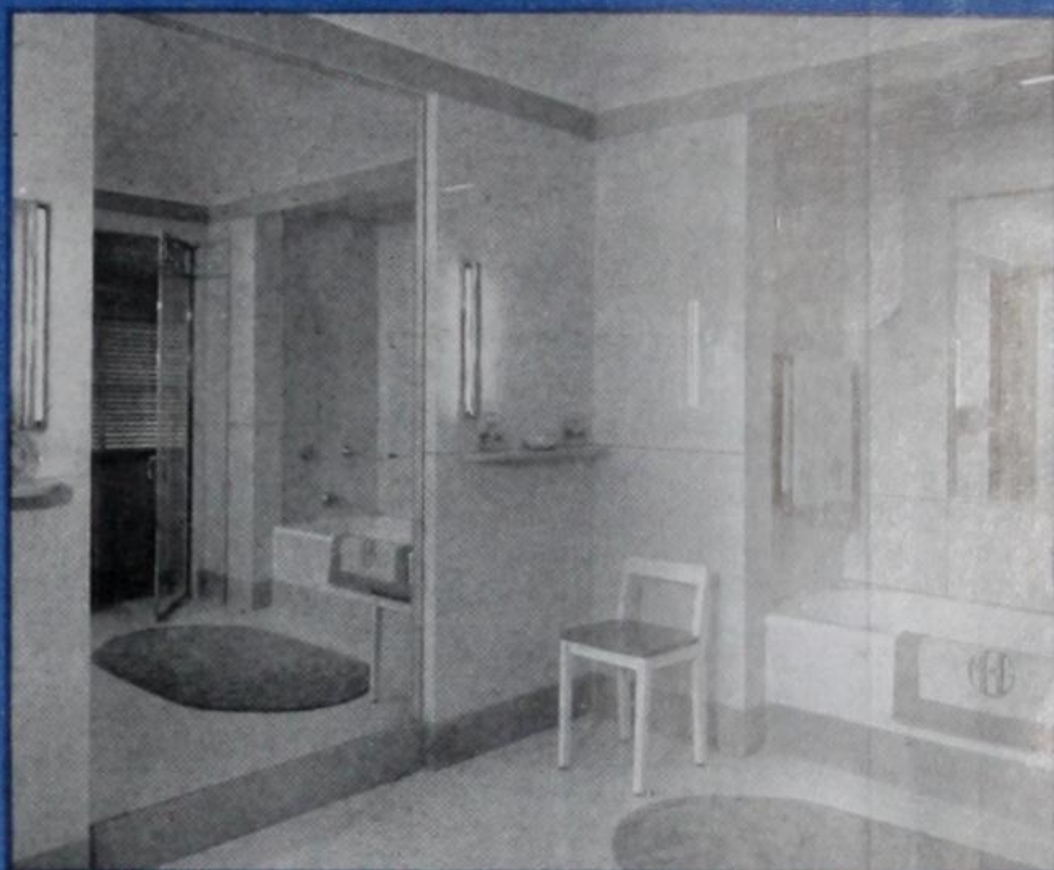
The finish of the face of the glass will be obtained by grinding the surface until a true plane is produced and then mechanically polishing to a high luster or mechanically treating to impart a soft or "Suede" finish. Installation will be made according to the manufacturer's recommendations and to the satisfaction of the architect. This contractor, before setting Structural Glass, shall size the rough wall with an approved type of bond coat.

Mastic cement used, shall be of a type tested and approved by the Structural Glass manufacturer.

All pieces shall be set plumb and true and with even flush joints which shall be filled with an approved type of pointing compound.

This contractor shall do all cutting and drilling of Carrara for other contractors provided they furnish accurate layouts so that it may be done at the factory.

At the completion of his work, this contractor shall remove all rubbish not caused by other trades, clean the Carrara and leave it in satisfactory condition.

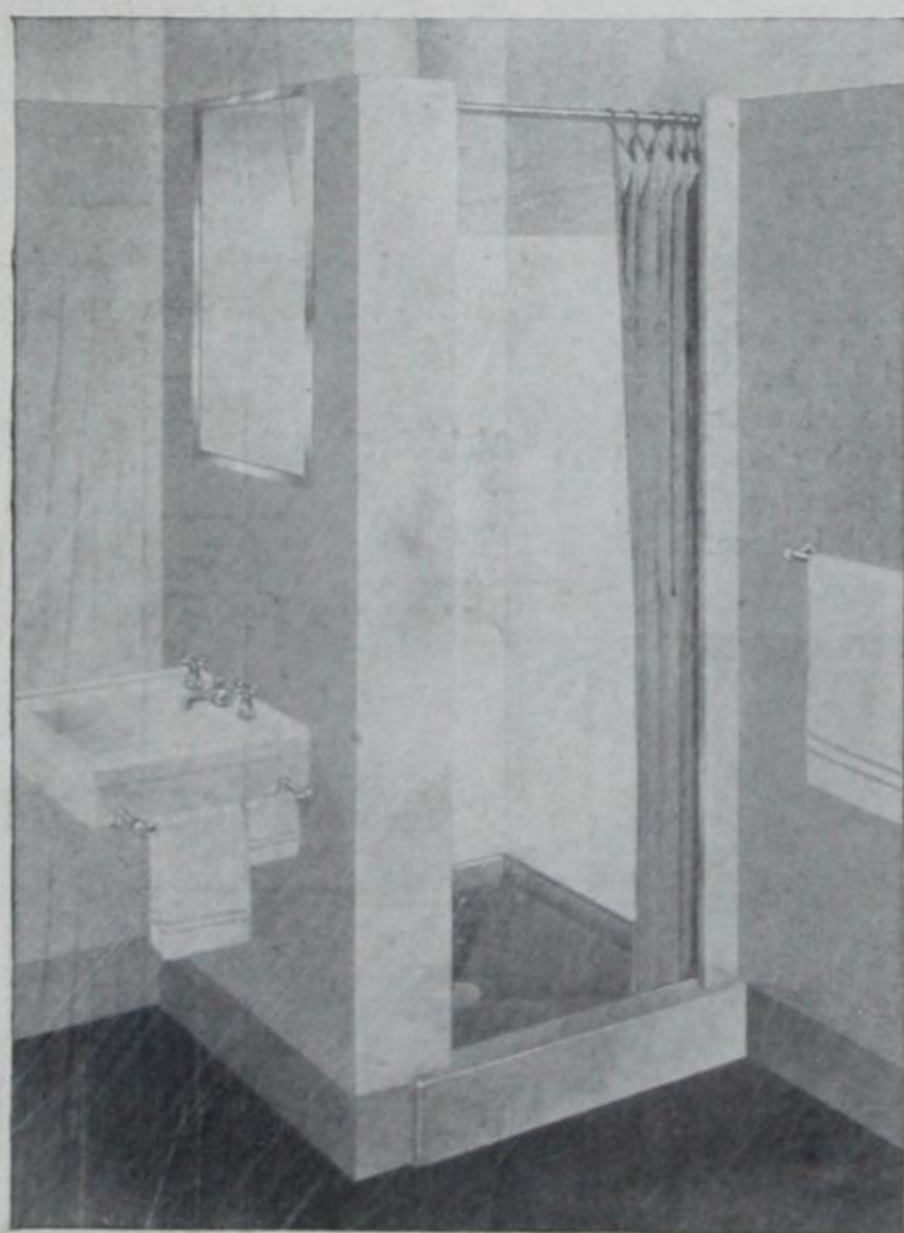
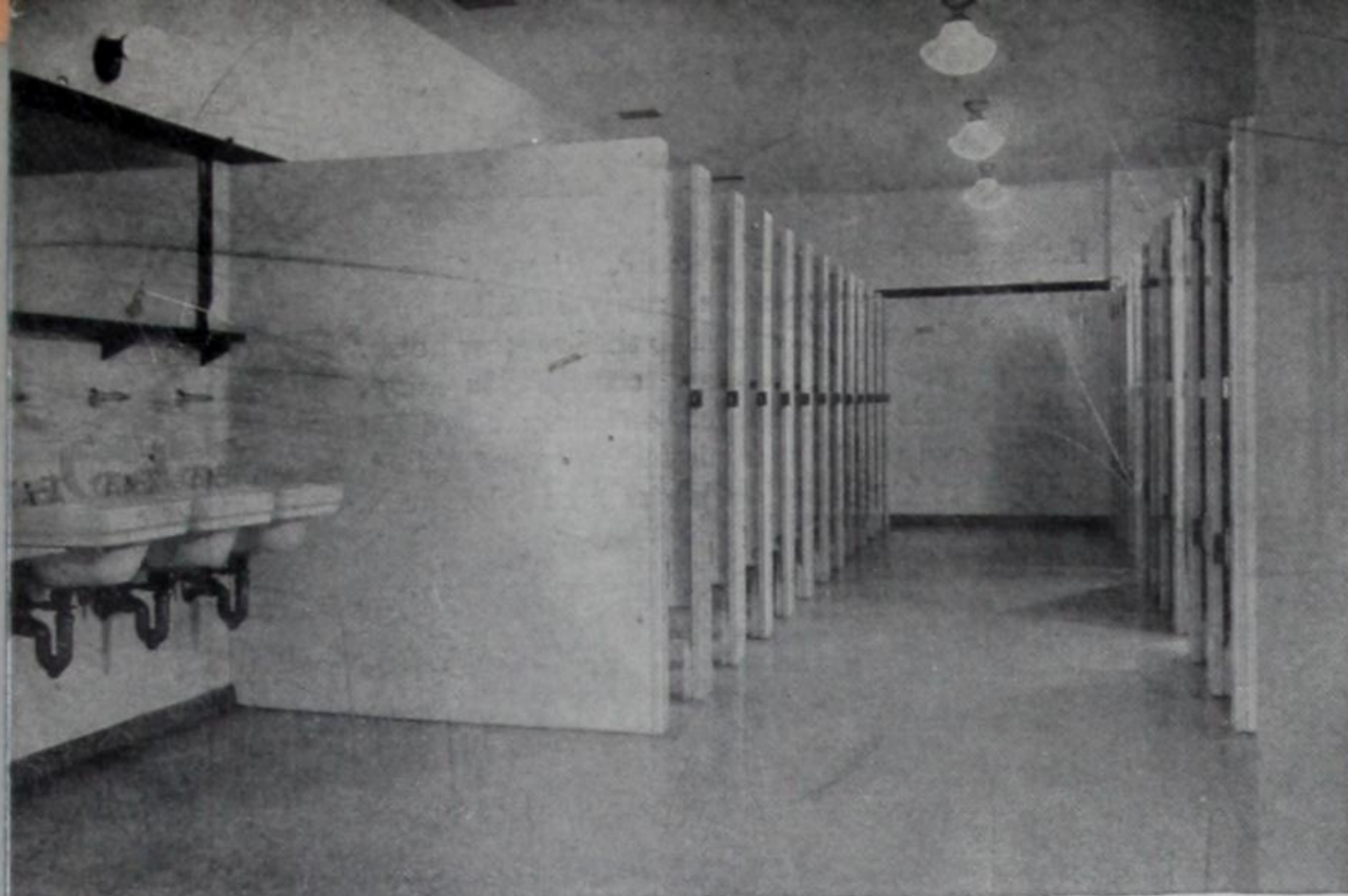


Art Glass

General Glass  
Catalogues

Miscellaneous





*Paint* **PITTSBURGH** *Glass*  
PLATE GLASS COMPANY

PRINTED IN U. S. A.

## ARCHITECTS WHO HAVE REPEATEDLY SPECIFIED *Carrara*

### Cass Gilbert

Woolworth Bldg.  
Union Central Life Bldg.  
Detroit Public Library  
Prudential Bldg.  
New York Life Bldg.  
U. S. Chamber of Commerce  
U. S. Court House, New York City  
U. S. Supreme Court  
U. S. Legation Bldg.

### John Russell Pope

Roosevelt Memorial  
U. S. Archives Bldg.

### Holabird & Root

Board of Trade  
Palmer House

### Warren & Wetmore

Ambassador Hotel Annex  
Grand Central Terminal  
New York Central Bldg.  
Commodore Hotel

### York & Sawyer

First National Bank  
Bowery Bank  
Salmon Tower  
Rhode Island Hospital Trust Co.  
New York Academy of Medicine  
Union League Club

### Shreve, Lamb & Harmon

500 Fifth Avenue Bldg.  
Insurance Company of North America

### Thomas W. Lamb

Albee Theatre  
Capitol Theatre

### Albert Kahn, Inc.

Cadillac Administration Bldg.  
Fisher Garage Bldg.  
Nurses' Home and Ford Hospital  
S. S. Kresge Administration Bldg.

### J. E. R. Carpenter

Lincoln Building  
515 Madison Avenue

### McKim, Mead & White

University Club, New York City  
Pennsylvania R. R. Station, Newark

### Graham, Anderson, Probst & White

Pennsylvania R. R. Station, Philadelphia  
Marshall Field Bldg.

### Trowbridge & Livingston

Trowbridge & Livingston, E. P. Mellon  
J. P. Morgan & Co. Bldg.  
Mellon Bank, Pittsburgh

### Sugarman & Berger

Mercantile Bldg.  
The New Yorker

### Cross & Cross

New York Trust Company  
Stone & Webster Bldg.

### Thomas M. James Co.

75 Federal Street, Boston  
Federal Land Bank

### War Department

Hospital  
Hospital  
Pentagon Bldg.

### Felheimer & Wagner

Union Station, Cincinnati  
Eric Passenger Station  
New York Central Station, Buffalo

### W. W. Ahlschlager

State Washington Bldg.  
Roxy Theatre

### John M. Howells and Raymond M. Hood

Tribune Tower

### Howells & Hood and Lockwood, Greene Eng., Inc.

Daily News

### Janssen & Cocken

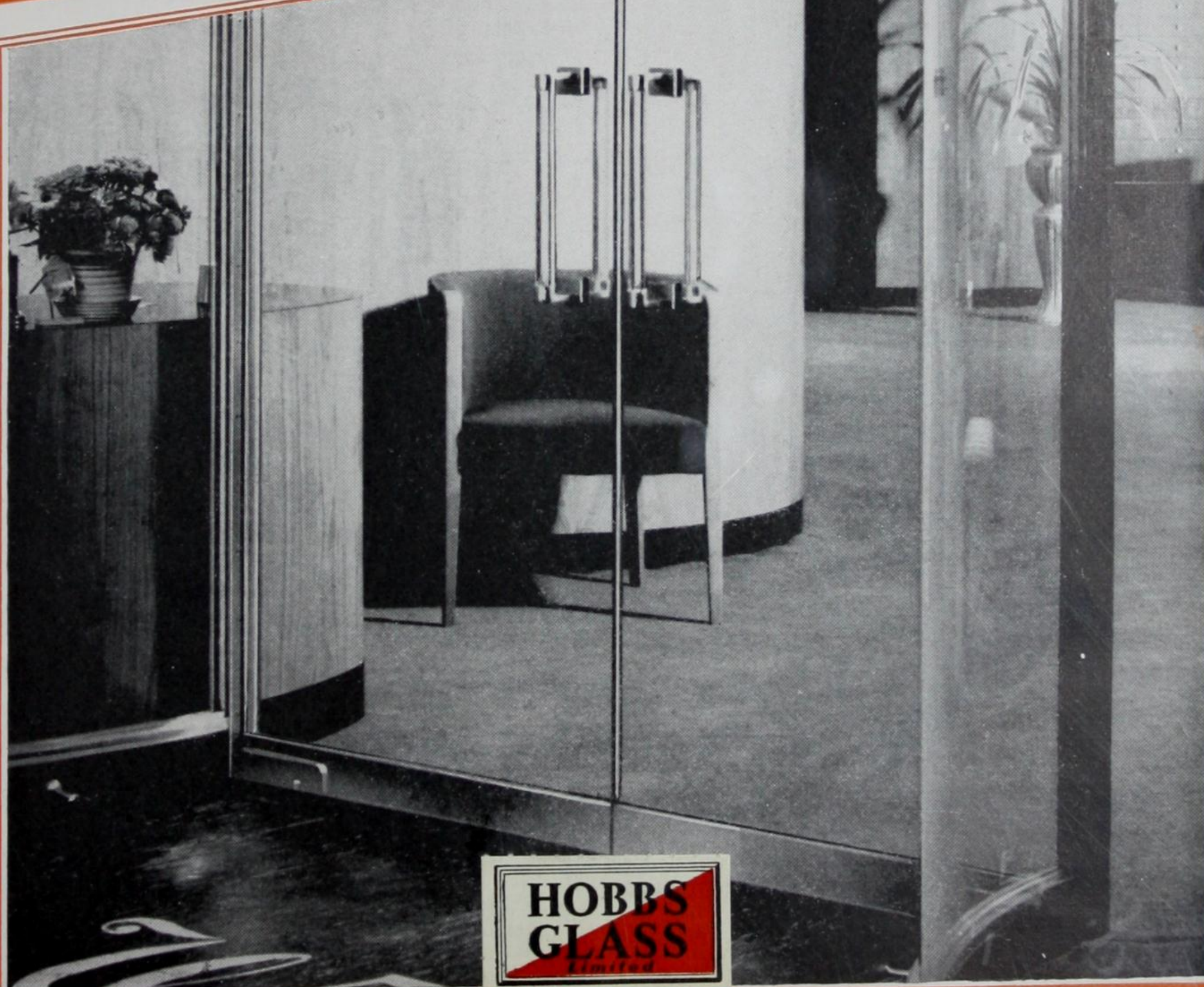
Mellon Institute of Industrial Research  
Kaufmann's Department Store



# HERCULITE

## *Glass*

# DOORS



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Pittsburgh Plate  
Glass Company



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Art Glass

General Glass  
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Miscellaneous



# H

## ERCULITE GLASS DOORS

fill a long-felt need in the design and construction of many types of buildings. For these doors afford a combination of several factors which architects and designers have long considered desirable for entrance and connecting doors.

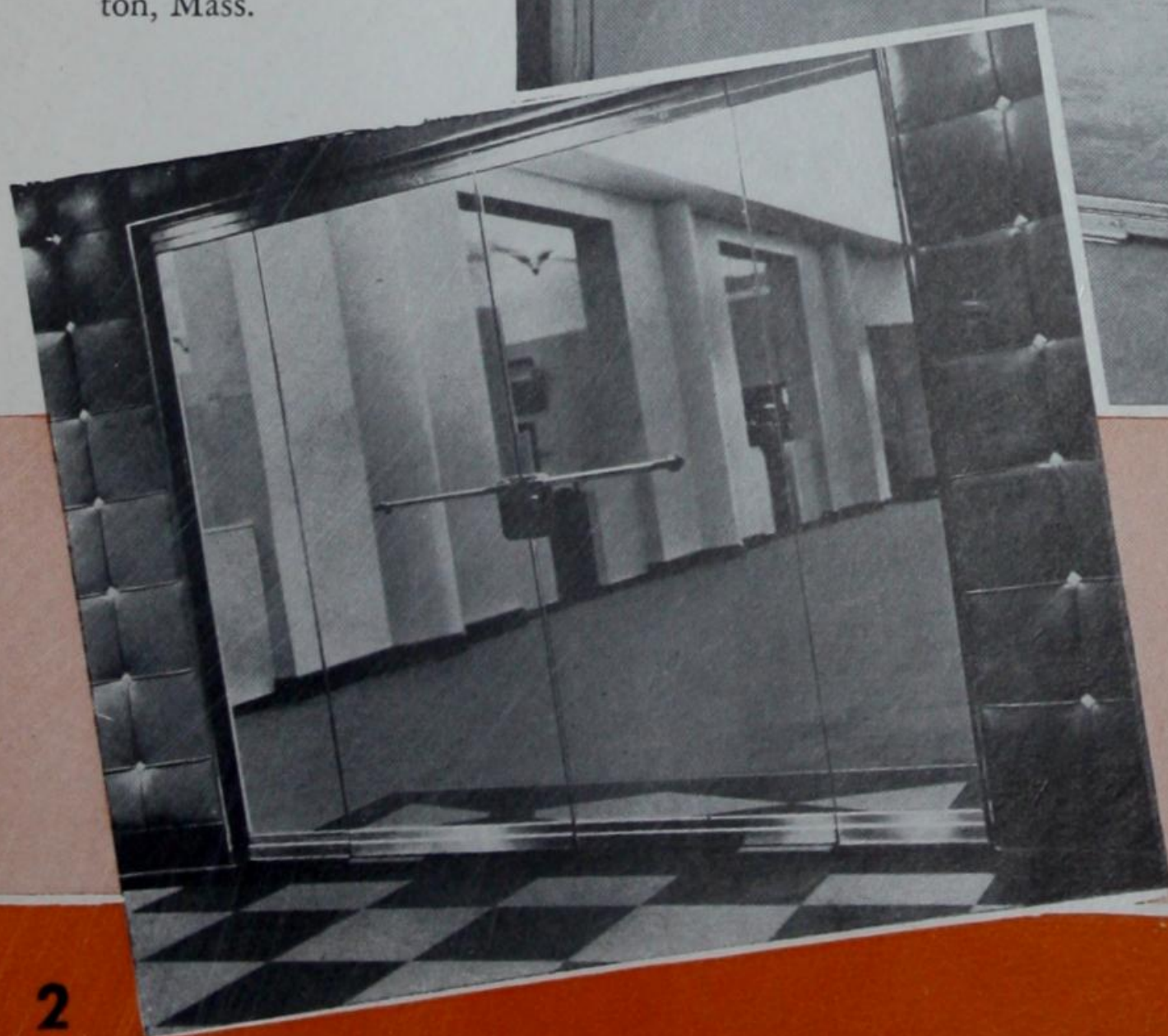
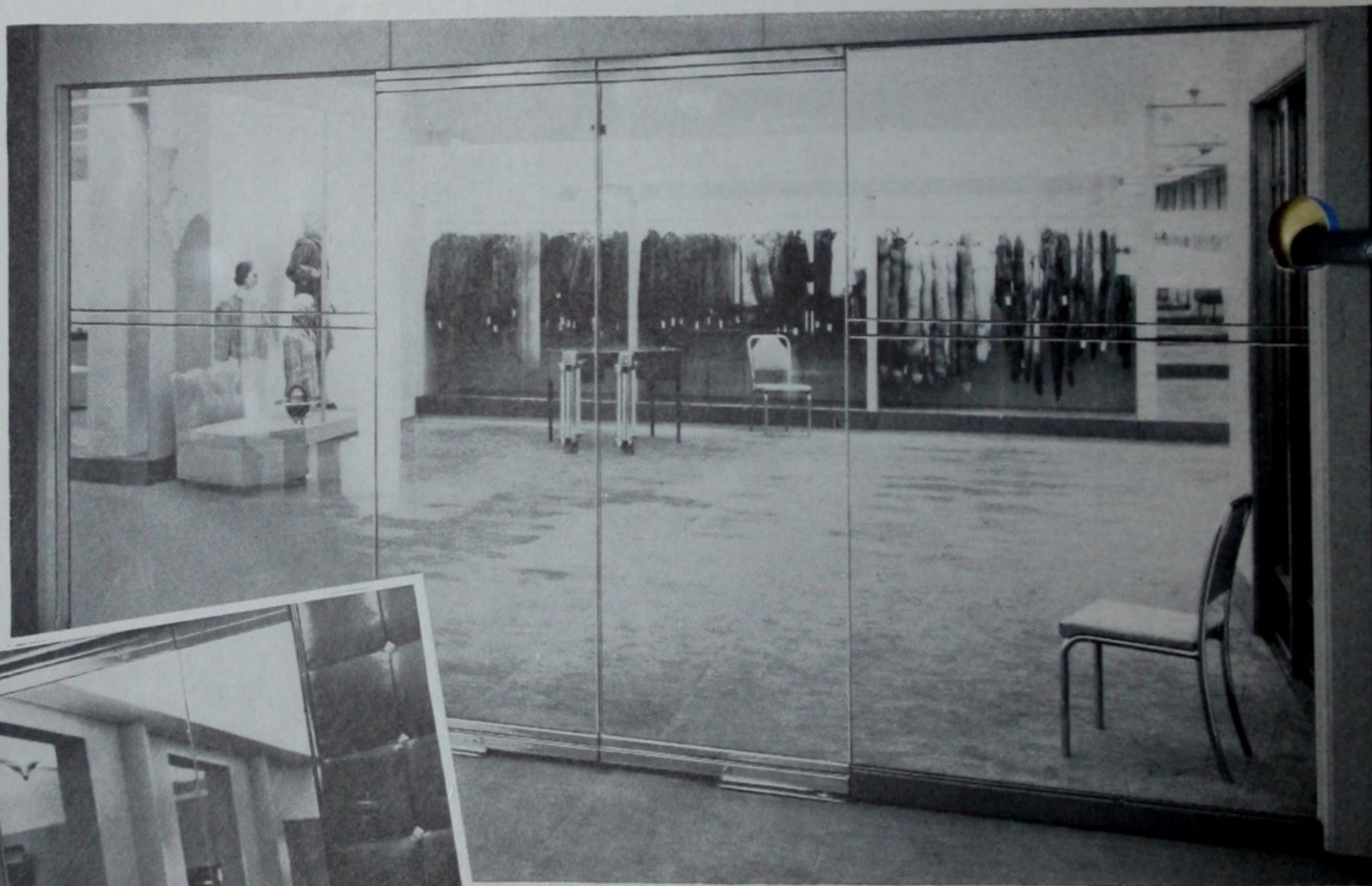
First, they permit the use of Polished Plate Glass without cross sash of any kind to interrupt the smooth, lustrous surfaces of the glass. Second, they are transparent . . . and consequently provide a powerful selling factor in retail establishments of all kinds. Herculite Doors are, in reality, an integral part of the display facilities of a store front or store interior, because they permit good visibility of the store areas beyond them. Third, Herculite Doors transmit light, and thus contribute importantly to the effective lighting of store interiors, building lobbies and other places in which they are used. And fourth, they bring

to entrance design a freshness, originality and beauty which only rich, Polished Plate Glass in large areas can create.

The characteristic of Herculite Doors which makes possible the combination of all these desirable factors is strength. Ordinarily, Polished Plate Glass, even in  $\frac{3}{4}$ -in. thickness, which is the standard thickness of Herculite Doors, does not have the necessary strength to permit its use in large door areas without heavy supporting cross sash. But Herculite Glass, while possessing all the surface brilliance and transparency typical of normal Polished Plate Glass, has also approximately four times the strength of normal plate glass of the same thickness. This added strength is the result of a special tempering process which gives Herculite far greater resistance to pressure and impact, and far greater flexibility under strain than normal Plate Glass.

Design possibilities with Herculite Tempered Plate Glass Doors are practically unlimited. And Herculite Doors have been used with outstanding success in practically every kind of building for both exterior and interior installations.

**EXCEPTIONAL STRENGTH** and all the beauty of Polished Plate Glass are combined in Herculite Doors. They make a handsome entrance—make the interior of a store part of the display. These free-standing doors are at the entrance of the fur salon of the Jordan Marsh Company, Boston, Mass.



**TREATMENTS** like this make the front of any building exceedingly eye-catching and inviting to the public. Herculite Doors have been combined with Herculite panels to allow greater "openness" and vision into the interior. Herculite Doors and panels such as these are also well-suited to offices—give an appearance of style and up-to-the-minute appeal.



# General Information

**SUGGESTED USES** . . . Obviously, the fine appearance and practical qualities of Herculite Doors fit them admirably for use in stores, banks, hotels, theatres, hospitals, restaurants, bars, office buildings, and public buildings of all kinds. Their use is especially effective where a sturdy, transparent door, or bank of doors, at the entrance to a store or building is a definite factor in attracting and holding public attention.

**STRENGTH** . . . Herculite Glass is mechanically  $4\frac{1}{2}$  to 5 times stronger than Plate Glass of the same thickness. Therefore, Herculite Doors, in their standard  $\frac{3}{4}$ -in. thickness, are able to withstand far harder usage than normal Plate Glass doors of equal thickness. In spite of their strength, Herculite Doors *can* be broken. When the outside surface is pierced deeply enough, the door disintegrates. But when a Herculite Door breaks, it cracks into small, cubical fragments resembling rock candy, and not into jagged splinters.

**UNAFFECTED BY TEMPERATURE** . . . Herculite Doors are not affected by varying surface temperatures. The glass does not become brittle in cold weather. Its resistance to impacts is as great at sub-zero temperatures as at normal temperatures.

**FIELD FABRICATION** . . . When it is absolutely necessary, in the field, to drill and tap holes in the fittings in such locations that the drill or tap may come in contact with the Glass, thereby risking the rupture of the door, extreme caution must be used, and depth-limiting collars should be attached to all drills and taps as a precautionary measure. The PITTSBURGH PLATE GLASS COMPANY accepts no responsibility for breakage caused by fabrication in the field.

**HERCULITE DOORS** . . . add a touch of clean, modern beauty to office entrances and offer many possibilities for interesting and attractive designs. They have a lustrous beauty, are transparent, transmit light, and have four times the strength of regular Plate Glass of the same thickness. This is the entrance to the Catering Office, Orrington Hotel, Evanston, Illinois.

**SPECIFICATIONS** . . . Complete details and full specifications may be secured by contacting the nearest branch of PITTSBURGH PLATE GLASS COMPANY or by writing direct to PITTSBURGH PLATE GLASS COMPANY, Grant Building, Pittsburgh, Pa.

**SHIPPING DATES** . . . Normally, three weeks are required from the date of receipt of an order for Herculite Doors at the factory, before shipment of the doors can be expected.

**BURGLAR PROTECTION** . . . Herculite Doors are readily adaptable to the usual means of burglar protection.





# Construction and Fittings Information

**DIMENSIONS** . . . The dimensional tolerances on Herculite Doors are plus 0, minus  $\frac{1}{16}$  in.

**DOOR SIZE** . . . Herculite Doors may be of any size up to 48 x 108 in., depending upon the architect's design.

**PANEL SIZE** . . . Panels over 12 in. wide serving as sidelights or mullions between doors must be  $\frac{3}{4}$  in. Herculite. Maximum panel size 72 x 108 in.

**CUT-OUTS AND NOTCHES** . . . All notches and other cut-outs must have corner fillets, the radius of which must be equal to the thickness of the glass.

**HOLES** . . . Must be at least  $\frac{7}{8}$  in. in diameter. Nearest edge of any hole must be at least 3 in. from any nearest edge of plate, and at least  $4\frac{1}{2}$  in. from tip of any corner. Holes must be located at least 6 in. apart, edge to edge.

**PIVOT DISTANCES** . . . Doors are finished with a standard pivot distance of  $2\frac{5}{8}$  in. But, pivot distances are adjustable to any pivot distance from  $1\frac{1}{8}$  to  $2\frac{5}{8}$  in.—the top pivot by a set screw, the bottom by a removable adaptor plate which must be re-drilled at the job.

**BUILDERS' HARDWARE** . . . Except for the metal fittings or attachments, which are prerequisite, and which are an integral part of the Herculite Door, no builders' hardware of any kind is furnished with the door. Exactly the same types and kinds of builders' hardware would be used with the Herculite Door, as would be used with normal bronze doors or other similar installations.

**LOCKS AND STRIKES** . . . Special locks and strikes have been manufactured and are available for Herculite Doors. There are four specially designed locks available, all carried in stock at the factory, for installation in the S-010 fitting. Also there is one specially designed lock available for installation in Door Types N to T inclusive.

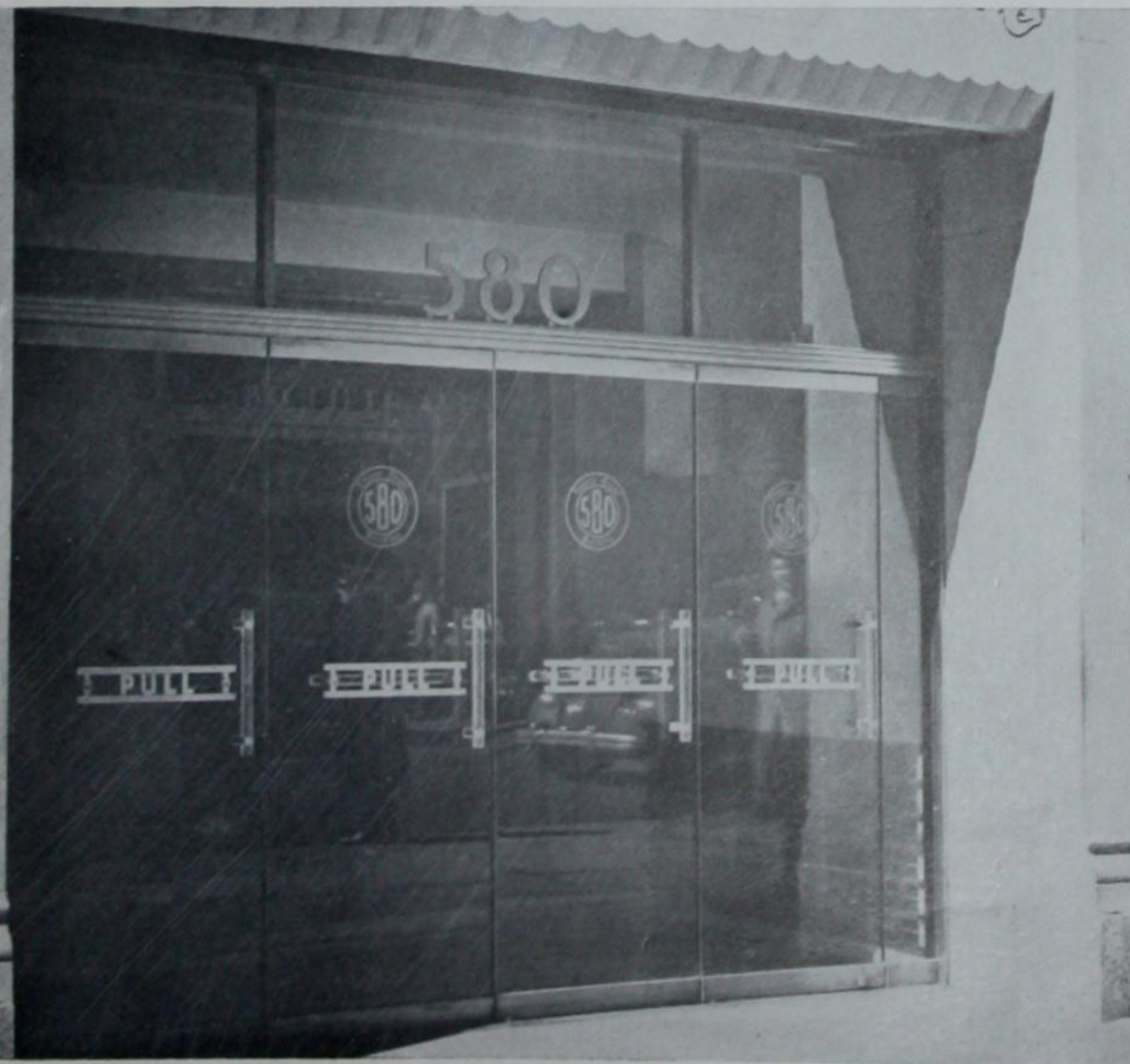
**DOOR PULLS, PULL AND PUSH BARS** . . . Door pulls should be of tubular type for lightness. Where pull or push bars are required, one or more holes must usually be drilled through the door at the factory, for their attachment. Exact location of these holes must be specified.

**FLUSH BOLTS** . . . Arrangements for flush bolt settings are indicated in door Types E to M inclusive, for corner settings, and can be furnished in channel door Types N to T inclusive, either top or bottom, or both.

**BUTT HINGES** . . . No provision has been made to hang Herculite Doors with butt hinges, because of the excessive difficulties involved.

**FINISHES** . . . The following finishes are available in the fittings supplied with Herculite Doors: Brushed Bronze (U.S.10); Polished Bronze (U.S.9); Polished Chrome-Plated Bronze (U.S.26); Brushed Chrome-Plated Bronze (U.S.26D); and Aluminited Aluminum.

A BANK of Herculite Doors creates an effective entrance in public buildings. In this installation, metal channels cover the entire top and bottom edges of the doors. The thrust of the door is carried by the transom bars.





# Erection Information

**INSTALLATION** . . . Arrangements for the installation of Herculite Doors may be made through the warehouses of PITTSBURGH PLATE GLASS COMPANY, or through jobbers.

## OPERATION

- (1) **Photo-electric Control.** Herculite Doors are ideally suited to be operated by photo-electric control, with equipment supplied by several dependable manufacturers.
- (2) **Door Holders and Closers.** These are supplied by several reputable manufacturers for use with Herculite Doors, but can be used only with channel fittings door Types N to T inclusive.
- (3) **Pivot Hinges.** We recommend a pivot hinge with the pivot directly under the door, capable of adequately supporting a door weighing 12 pounds per square foot.

**CLEARANCES** . . . A clearance of  $\frac{1}{8}$  in. minimum at each edge of the door is recommended. Since the tolerances on Herculite Doors are plus 0 and minus  $\frac{1}{16}$  in., finished clearance where the free edges of doors meet may reach  $\frac{1}{4}$  in.; and where the free edge of one door meets the hinged edge of another in a bank of doors, the clearance may reach  $\frac{3}{16}$  in.

**WEATHERTIGHTNESS** . . . The weathertightness of double-acting Herculite Doors is fully equal to that of metal double-acting doors commonly used for similar purposes.

**THIS HERCULITE DOOR**, without interruption between the door and the adjacent  $\frac{3}{4}$  in. Herculite panels, allows clearer vision into the store itself. Daylight streams in and contributes to the effective lighting of the store interior. James F. Eppenstein, Architect.

**FRAMES** . . . In general, the door frames into which Herculite Doors are intended to fit should preferably be of bronze or some other similar metal. Where wooden frames are used, satisfactory anchorage for the various pivot hinges and similar equipment must be incorporated in the door frame.

**FURTHER INFORMATION** . . . Further information about Herculite Doors will be supplied you promptly upon request. Address inquiries to PITTSBURGH PLATE GLASS COMPANY, Grant Building, Pittsburgh, Pa.



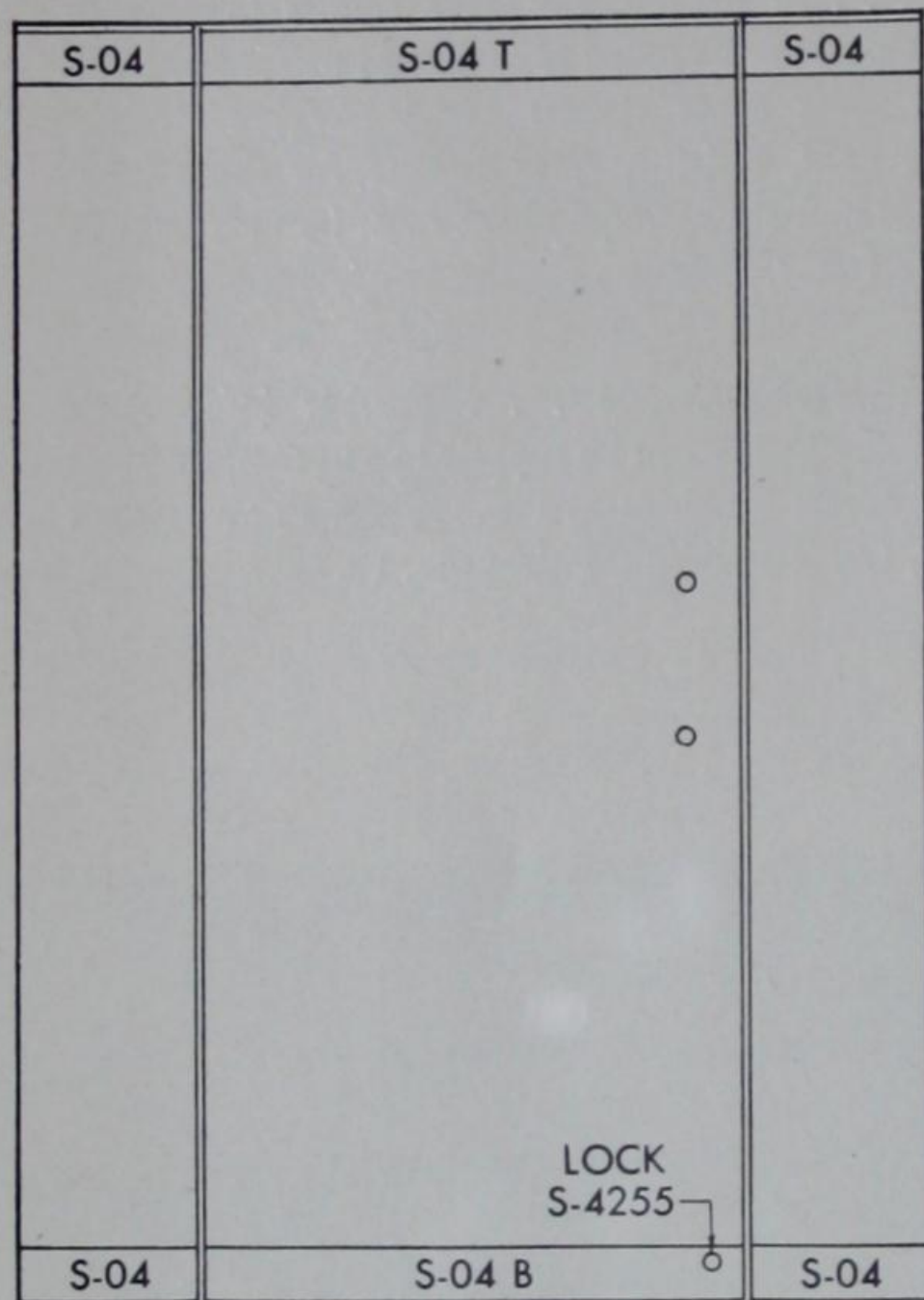


# HERCULITE DOORS

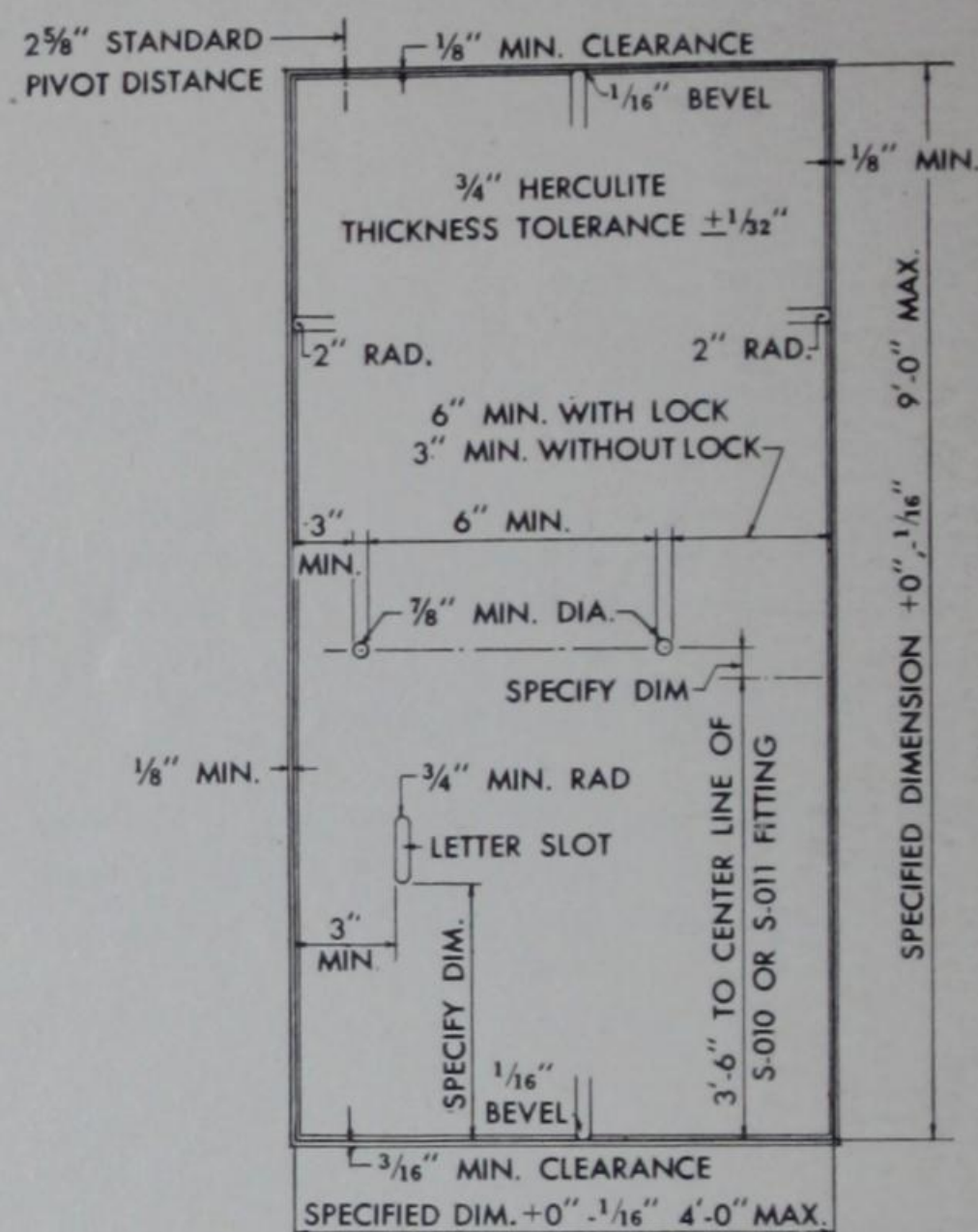
DESIGN LIMITATIONS

## AND FITTING ASSEMBLIES

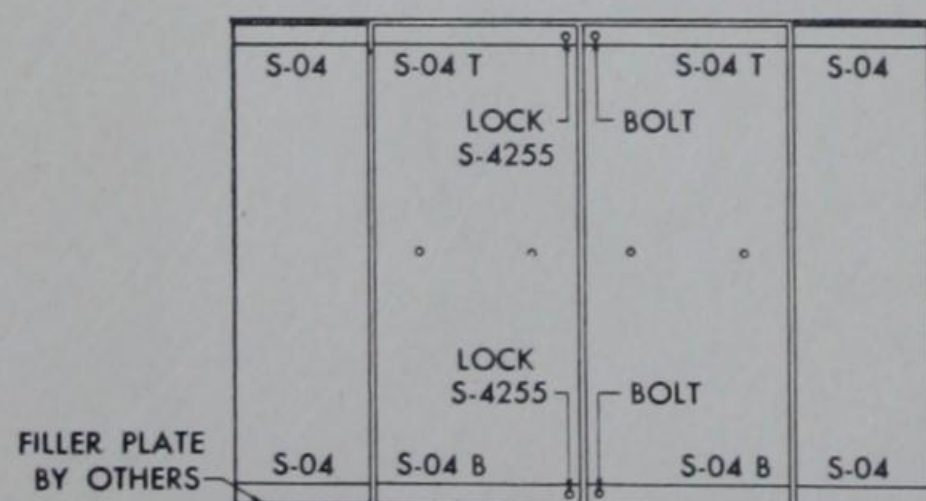
NO SCALE



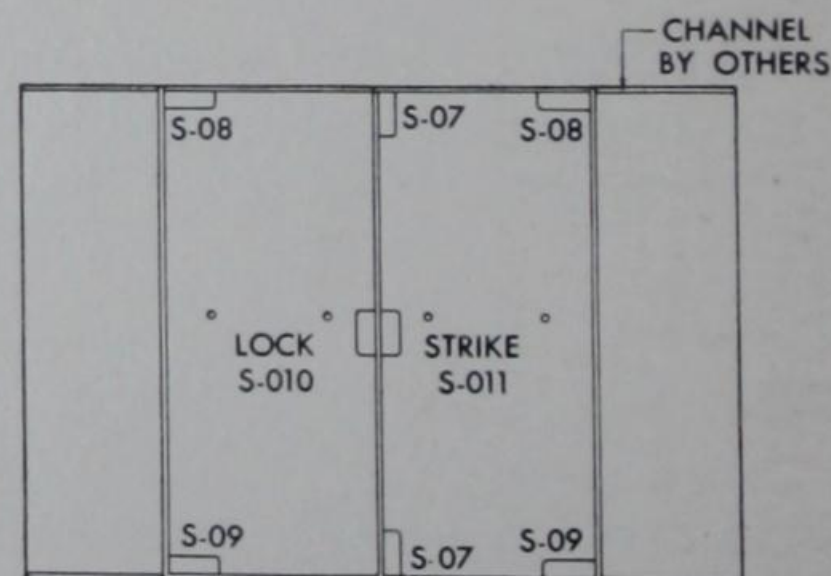
RECOMMENDED TREATMENT  
FOR 5'-0" OPENING



MINIMUM REQUIREMENTS FOR  
CLEARANCES, DRILLING, ETC.



TYPICAL INTERIOR ELEVATION  
ILLUSTRATING CHANNEL TYPE FITTINGS



TYPICAL INTERIOR ELEVATION  
ILLUSTRATING UNIT TYPE FITTINGS

DETAILS OF HERCULITE DOOR FITTINGS ARE AVAILABLE AT ALL PITTSBURGH PLATE GLASS CO. OFFICES.



# HERCULITE DOORS

## STANDARD TYPES

Complete units, consisting of single doors and pairs of doors, with or without side lights and transoms, will be available early in 1946. Units will incorporate structural channel bucks, finished trims, integral floor checks, pivots and door-holders, as well as thresholds and push-and-pull bars. Complete details are available at Pittsburgh Plate Glass Company offices.

NO SCALE

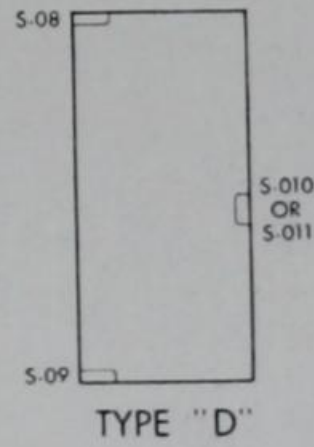
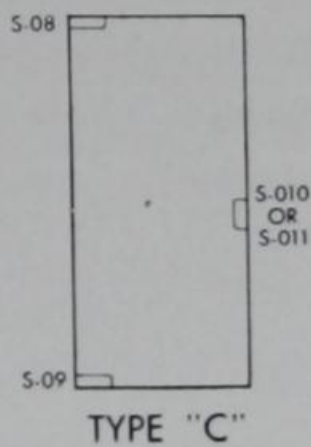
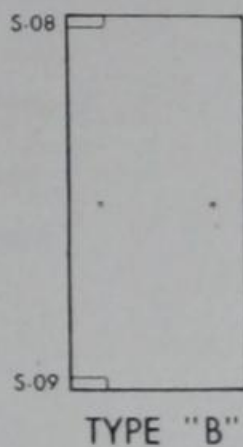
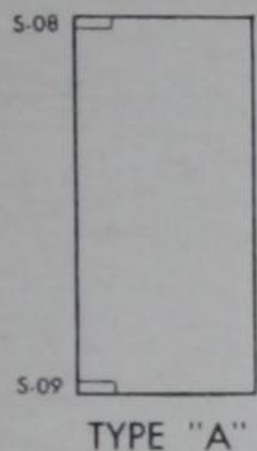
PLAIN

PUSH BAR

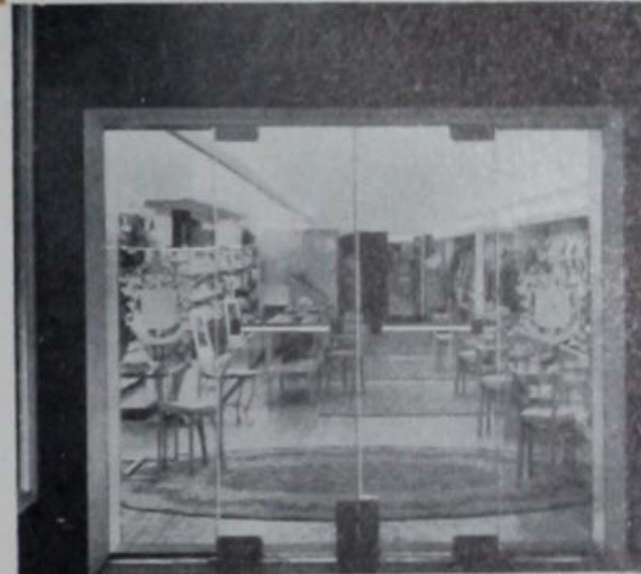
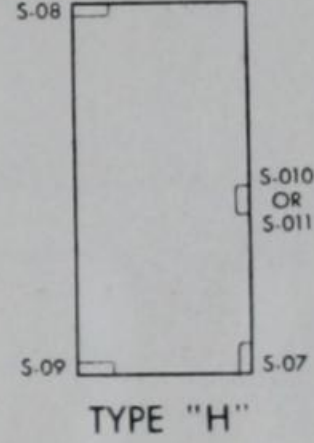
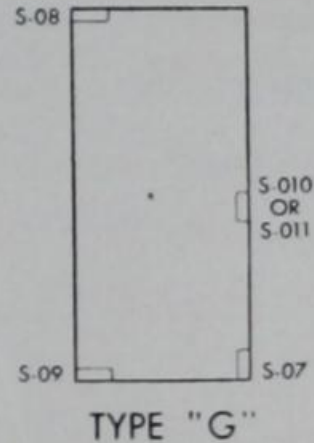
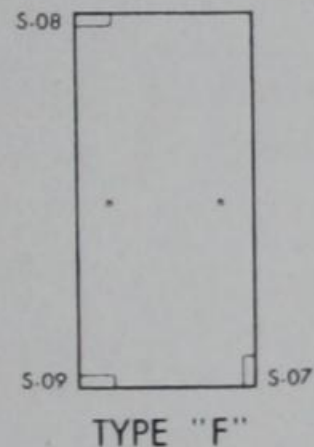
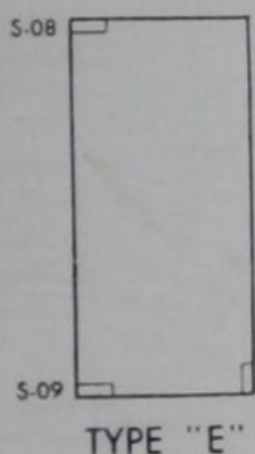
PUSH BAR-LOCK  
SINGLE HOLE

PLAIN LOCK

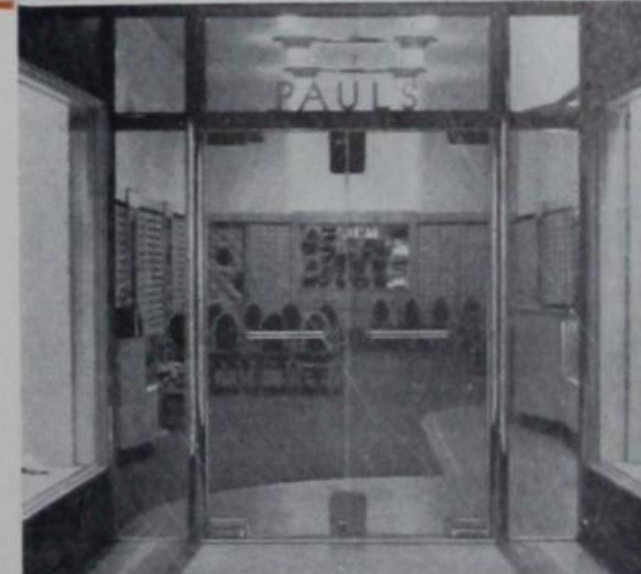
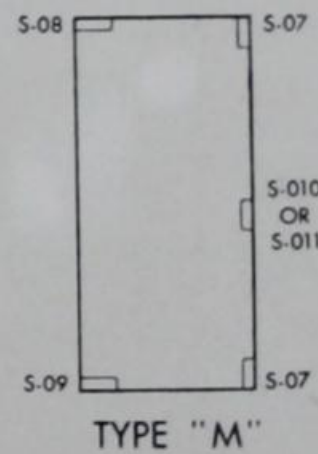
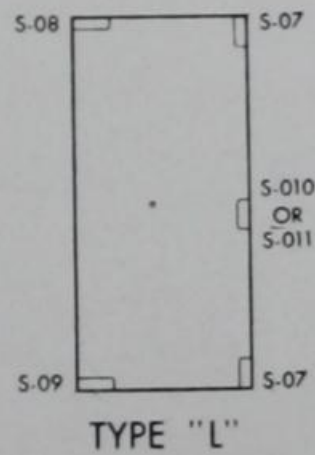
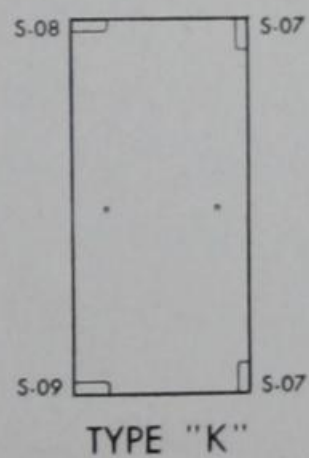
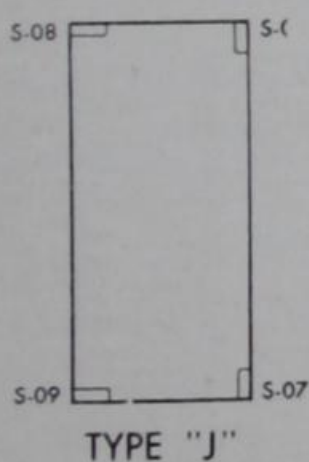
PLAIN



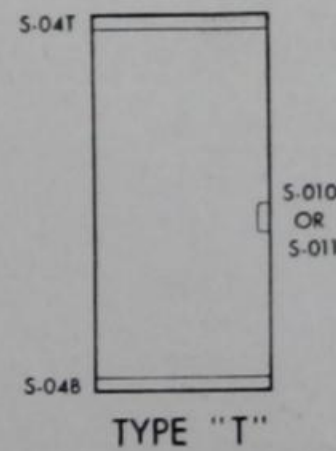
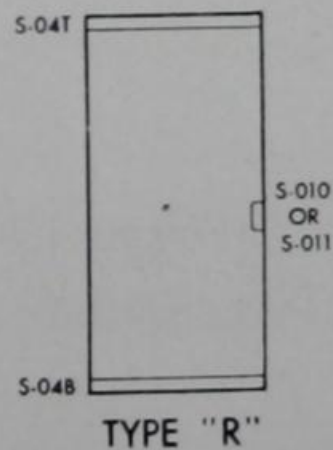
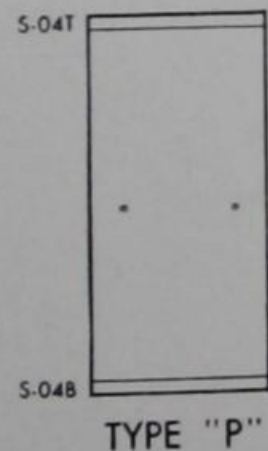
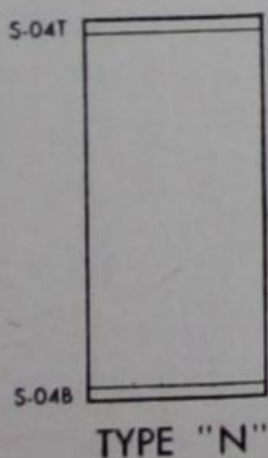
BOTTOM BOLT SETTING



TOP AND BOTTOM BOLT SETTING



TOP AND BOTTOM CHANNEL



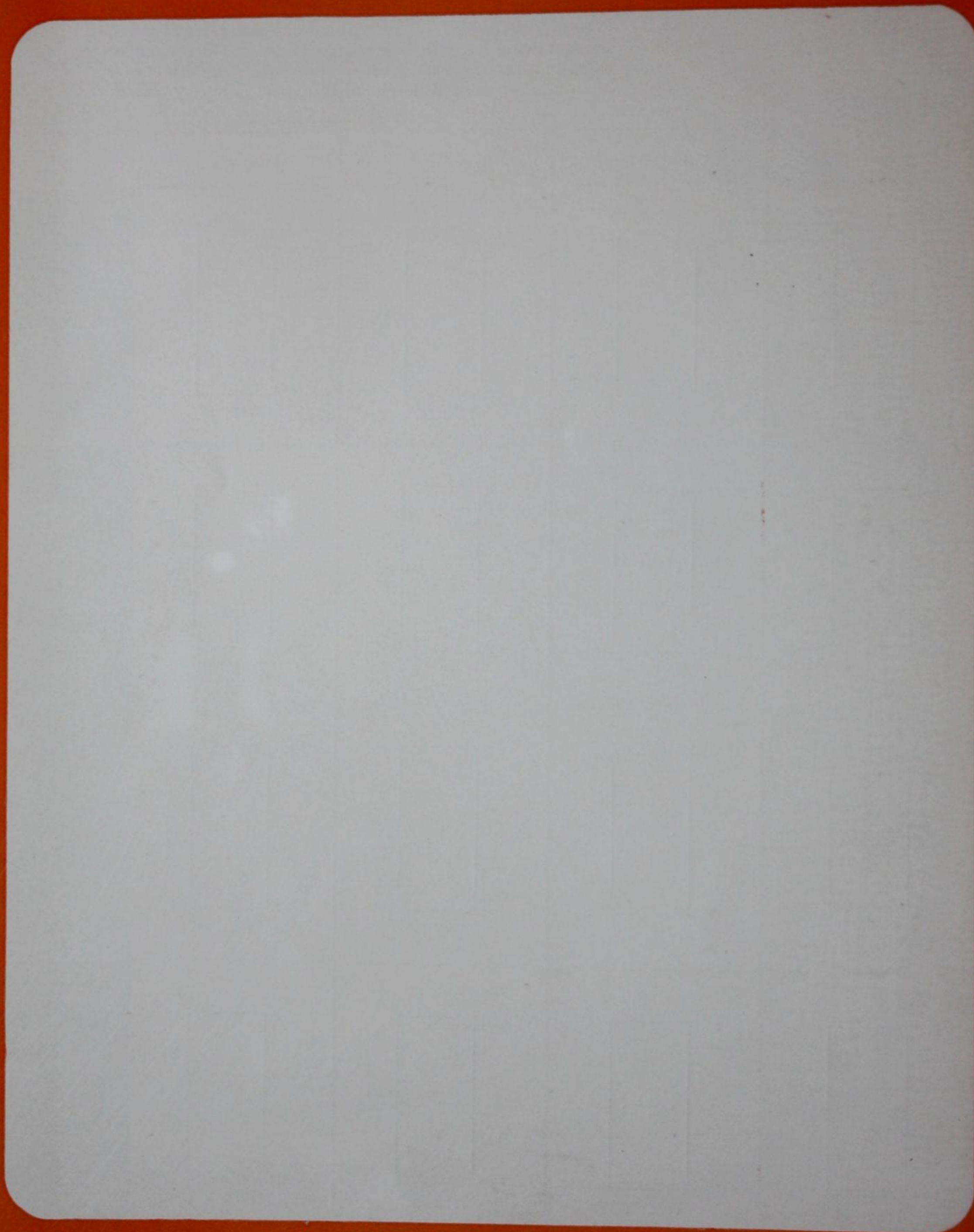
Art Glass

General Glass

Miscellaneous

GLASS COMPANY







Art Glass

General Glass  
Catalogues

Miscellaneous

...very  
flexible as un-  
ny times as resistant  
strength of tempered  
(Modulus of Rupture)  
in. of cross section.

next page →







*How to make*  
**bathrooms**  
**& kitchens**  
*better-looking*

**PITTSBURGH PLATE GLASS COMPANY**


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flexible as un-  
ny times as resistant  
strength of tempered  
(Modulus of Rupture)  
(in. of cross section.

next page →





## WALLS OF *Carrara Glass*

If you want your bathroom to be exceptionally good looking, colorful and smart . . . if you want a kitchen as practical and easy to keep clean as it is attractive in appearance . . . if you want to be proud of your bathroom and kitchen . . . Carrara Structural Glass is your material.

Carrara walls or wainscot can transform an old bathroom or kitchen into a new, eye-catching thing of beauty and utility. Or they can make the bathroom or kitchen of a new home even more beautiful and practical than you dreamed. For Carrara Structural Glass combines, in one lovely material, all the qualities and advantages which make for bathrooms and kitchens of true distinction.

### APPEARANCE

Carrara is a structural glass that is made just like fine plate glass . . . mechanically ground and polished to a true, flat, lustrous surface of great beauty. The sleek, reflective finish of the glass means that Carrara rooms take on greater size, spaciousness, airiness, light and charm. There is a rich elegance about a room walled with this material that must be seen to be appreciated . . . an appeal to good taste and quiet beauty unmatched by any other structural material. In addition to polished-finish Carrara, there is also available a Suede-finish Carrara, with more restrained surface reflections.

### COLORS

An important part of Carrara's charm is in its colors . . . soft, mellow colors which singly, or in striking combination, create rooms that arouse the enthusiastic praise of everyone who sees them. There are ten colors available . . . enough to give you a wide choice of color schemes and tone



## DECORATION OF CARRARA

harmonies. These ten colors are: Black, White, Jade, Gray, Ivory, Beige, Forest Green, Rembrandt Blue, Orange and Wine. How various of these colors may be used together with stunning effect is demonstrated in the pictures on the following pages.

It is possible to obtain several types of surface decoration on Carrara Glass, widening still further the possibilities for design and beautification of bathrooms and kitchens. For example, Carrara can be sand-blasted with almost any design or decoration you desire . . . and the resulting figures emphasized by the application of any color you like. Carrara can be fluted, it can be bent for rounded corners, it can be laminated to combine several Carrara colors. And of course, Carrara can be set in panels of various sizes and shapes.

The unique beauty of Carrara Glass walls and wainscoting is equalled by their remarkable practical utility. A Carrara wall will never craze, check, or stain. Its color will never fade. Its bright, smooth finish lasts year after year. The wall will never absorb bathroom or cooking odors. It will not be affected in any way by those usual enemies of bathroom and kitchen walls: moisture, chemicals, grease, grime, pencil marks. And as for cleaning, a Carrara wall is a housekeeper's dream . . . just wipe it down occasionally with a damp cloth.

## OTHER USES

Because of its good looks and many practical qualities, Carrara is an excellent material for many other uses besides bathroom and kitchen walls. Use it for window sills, niche linings, desk and table tops, shelves of every description . . . anywhere in the home where beauty, permanence and easy cleaning are important factors.

Carrara Glass has been widely used for a generation. Your architect and contractor are familiar with it. They will gladly discuss it with you and include it in your house plans at your request. And they will corroborate the fact that Carrara Structural Glass has been tested and approved as outstandingly successful in installations of every type.

Call us today. Investigate . . . now . . . the possibilities it holds for making your bathroom or kitchen smarter and more useful. We will be glad to give you an estimate of cost.

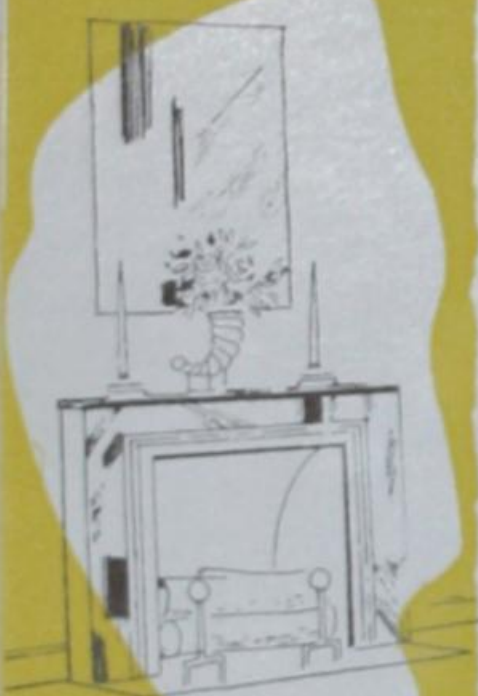
General Glass  
Catalogues

Miscellaneous

flexible as un-  
times as resistant  
length of tempered  
modulus of Rupture)  
n. of cross section.

ext page →





### *How to frame a fireplace*

Just put a border of rich Carrara Glass around your fireplace opening. It'll be the hit of the house!



*Walls that never grow old* guarantee permanent good looks when you glorify your bathroom with Carrara Glass. Imagine an ivory and green beauty like this in your home... wouldn't you be proud?

### *As easy as pie*

to keep clean and sparkling! A few swipes with a damp cloth every so often is all a Carrara bathroom needs. And how about a sand-blasted, painted design above your tub for real chic?







*Want to make  
your friends  
jealous?*

Show 'em a gray and blue Carrara bathroom like this... and watch 'em turn green with envy! You'll love that Plate Glass shower door, too.



*Bathroom looks  
twice as big*

when it's walled with reflective Carrara. A built-in mirror over the tub helps make it look bigger, too. Ivory, wine and jade is a stunning color scheme.



*A thing of beauty  
is a joy forever!*

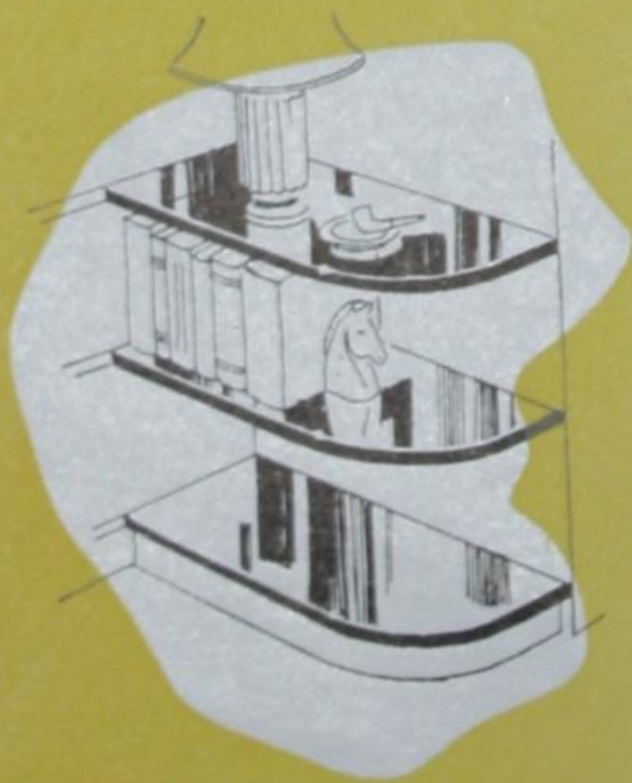
You never get tired of a handsome Carrara room like this. It stays young, fresh and new-looking year after year. The more you see it, the more it grows on you.

General Glass  
Catalogues

Miscellaneous

ext page →





*Is hubby grouchy when he gets up?*

If he is, a bathroom like this will smooth his ruffled fur in a minute! He can't shave and shower in such lovely surroundings without being cheerful! And remember, these Carrara walls will look as young and charming years from now as they do today. For Carrara doesn't check, craze, stain or fade with the passing of time.

*Make use of that empty corner*

Have a few corner shelves of Carrara installed for books, bric-a-brac, treasured gadgets.





### *Here's a two-tone dream*

for any home! Delicate ivory Carrara walls combined with soft green in fixtures and curtains make a bathroom burst with personality ... but a restrained and soothing personality that no one can find fault with.

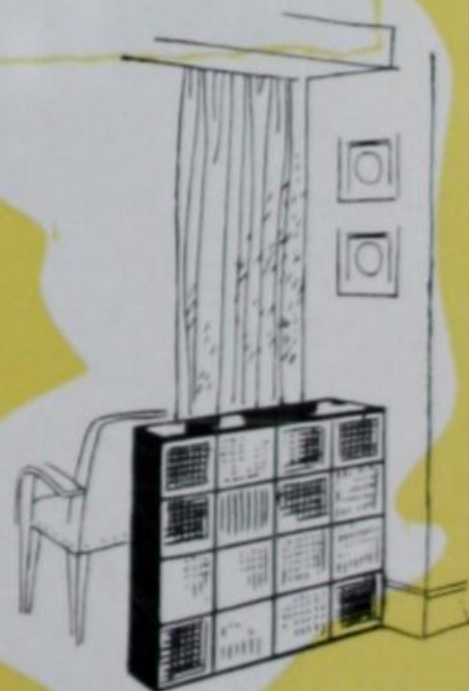
### *New way to protect kitchen wall*

A strip of Carrara Glass above stove and work-surface acts as a splash-board that just laughs at water, grease and cooking fumes. Easy to clean, too.



### *Budget suggestion*

No need to have complete Carrara walls to get the benefits of Carrara. If you're operating on a tight budget, get a four-foot wainscot of Carrara for your bath. It will do wonders for the room.



### *Looking for a smart cover?*

For semi-partitions, a piece of Carrara to match the room's color scheme is dandy. Decorative and practical.

flexible as un-  
times as resistant  
length of tempered  
odulus of Rupture)  
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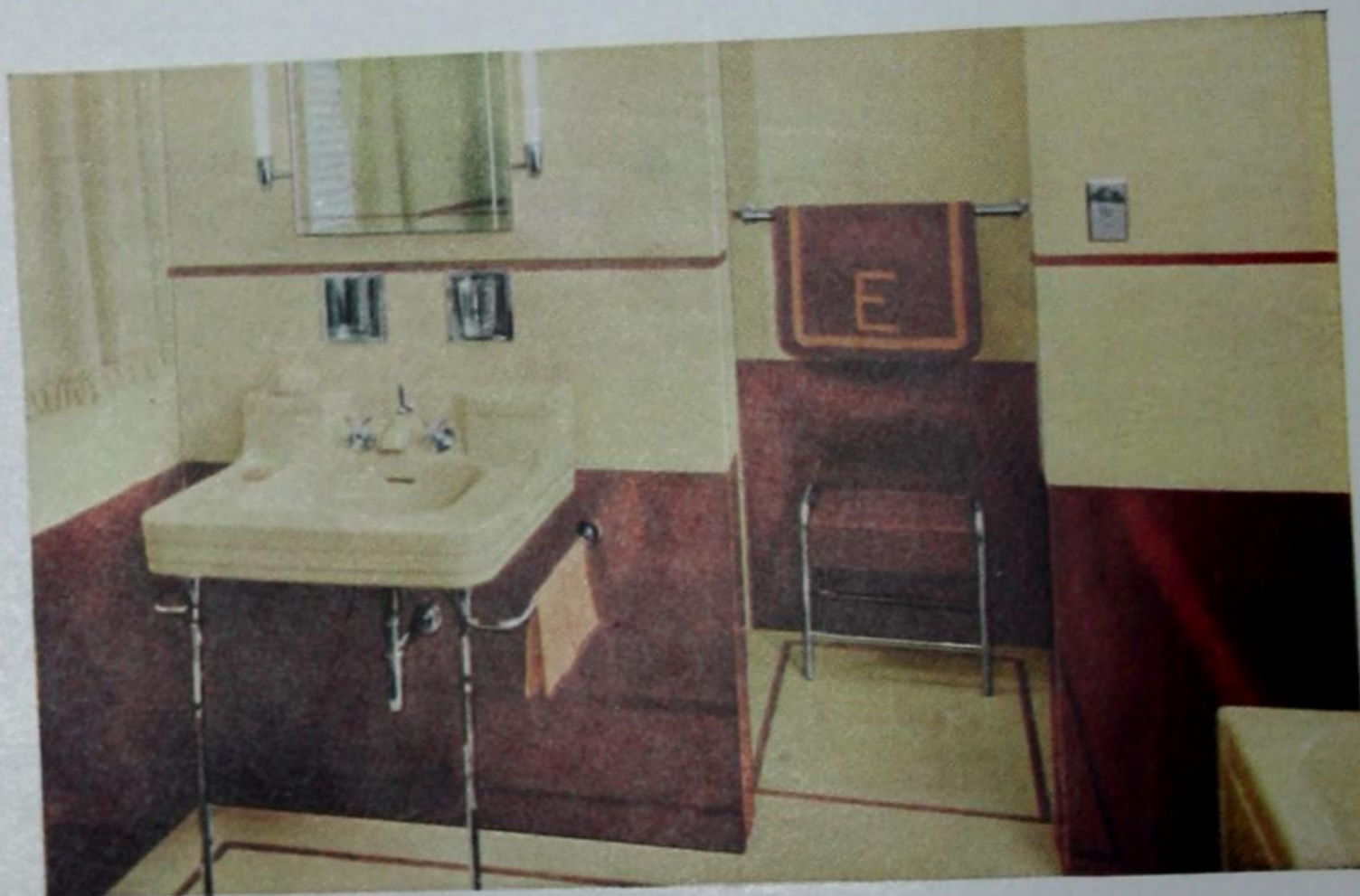
General Glass  
Catalogues

Miscellaneous





*Here's a failure-proof recipe* for a carefree kitchen. Cool, reflective walls of gray Carrara, with touches of red for gayety. It's fun to work in a kitchen like this. Ask any woman if we're not right.



*Running first in popularity*

is this smart combination of ivory and wine for up-to-the-minute bathrooms. Rich, eye-catching, easy to live with, but definitely in the best of taste! Want a bathroom like it?





### *Solution for shelf-room problems*

Long, polished shelves of black Carrara Glass in a gray Carrara bathroom are not only a sight for sore eyes. They're a genuine blessing to you when it comes to storing towels, toilet articles and such.



### *Window sill de luxe!*

Carrara is just the thing—handsome as can be, and never harmed by moisture or stains. Low cost, too!



### *Counsel for conservatives*

You can't do better than to select pure white Carrara for a bathroom as clean and sanitary and attractive as anyone could wish. You can add color with accessories.



### *No kitchen blues here!*

No sir! Nothing but sunshine and cheerfulness in a kitchen walled with glistening ivory Carrara like this. The panel of PC Glass Blocks is a good idea, too. Privacy with lots of daylight.



# *Ready-built*

## CARRARA GLASS PANELS

Now available for bathtub recesses and kitchen stove backing in new low-cost homes

NEW, INEXPENSIVE  
METHOD

HOW READY-BUILT  
PANELS WORK

● There is no substitute for the beauty and utility of a complete Carrara bathroom or kitchen. But in some cases, especially where the low-cost home is concerned, the careful workmanship, the time and necessary labor costs involved in the installation of a complete Carrara room have prevented the use of this lovely material.

● But now . . . it is possible to get the beauty and utility of Carrara even in the lowest-cost new homes. For a new method of construction has been developed which greatly simplifies installation of Carrara in bathtub recesses, and for kitchen stove backing . . . and thus greatly reduces costs as well, so that Carrara comes within the reach of all.

● Panels of Carrara Glass are securely mounted, in the factory, on plasterboard of the same thickness as that used in the rest of the house. On certain sides, this plasterboard extends beyond the edge of the Carrara Glass, providing a rim, or flange, around the glass which can be fastened

### *Bathtub recess*

of Ready-Built Carrara Panels adds plenty of glamor to your bathroom. It's 100% practical, too. Saves the walls. Easy to clean. Quick and simple to install.







### *Kitchen stove backing*

of Carrara is a cinch with the new Ready-Built Panel. Such a panel is absolutely impervious to grease, moisture, dirt. Wipes off with a damp cloth. Never absorbs cooking odors.

directly to the studding—thus anchoring the Carrara panel firmly in place. Necessary holes for plumbing pipes, soap dish, etc. are all drilled in the Carrara at the factory, just as needed, before the panels are shipped to your house. Therefore, when the package of Ready-Built Carrara Panels arrives, your bath-recess wainscoting or kitchen stove backing can be installed quickly and easily. And when plastering is done, the plaster finishes flush with the face of the Carrara.

#### ADVANTAGES

- In the bathtub recess, Ready-Built Carrara Panels not only add greatly to the good looks and smartness of the bathroom, but also serve the practical purpose of protecting a vulnerable area against splashed water.

Furthermore, an occasional wiping with a damp cloth keeps the Carrara panels spotlessly clean and gleaming, and the passing years have absolutely no effect upon them. A kitchen usually shows its age first in the wall behind the stove. But with a Ready-Built Carrara stove backing, cooking grease, grime, fume marks have no terrors . . . because a damp cloth wipes them off as slick as a whistle.

- Bathtub panels up to 48 inches above the top of the tub. Where there is a shower, this height is recommended. The 48-inch wainscot has one horizontal joint. Where there is no shower, a 24-inch panel above the tub may be used. Stove backing panels are 44 inches by 28 inches.

- Ready-Built Carrara Glass Panels are available in Black, White, Ivory, Jade, Beige, Gray, Forest Green and Rembrandt Blue.

#### SIZE OF

#### READY-BUILT PANELS

#### COLORS AVAILABLE

General Glass  
Catalogues

Miscellaneous

flexible as un-  
times as resistant  
length of tempered  
modulus of Rupture)  
1. of cross section.

ext page →



*Carrara Glass*

**"PITTSBURGH"** *stands for Quality Glass and Paint*



# Pyralass TILE

tile

General Glass  
Catalogues

Miscellaneous

...very  
...as un-  
...times as resistant  
...the tensile strength of tempered  
glass (determined as Modulus of Rupture)  
is 29,500 lbs. per sq. in. of cross section.  
continued on next page →



*Carro*



# Glass IS VERSATILE

GLASS, in its many shapes and forms, is today one of the most versatile of all materials. The old conception of glass as a fragile, colorless, undramatic material, good only to keep out the weather, is definitely a thing of the past. Product designers nowadays are able to find in glass a combination of advantages and properties found in no other single material in existence. The old weaknesses of glass as a design material have been overcome by brilliantly successful research and by sweeping manufacturing improvements. And a host of new, appealing qualities have been added to glass which help to make it the ideal material for scores of practical, attractive, and economical product applications. Just what glass has to offer the product designer in the way of properties and characteristics suitable for hundreds of product uses is described below.

PITTSBURGH PLATE GLASS COMPANY



## CHARACTERISTICS OF "Pittsburgh" Glass



### TRANSPARENCY



Made only from quality ingredients and mechanically ground and polished to a true surface, Pittsburgh Plate Glass is completely transparent. It affords perfect vision through it from any angle, whether used in thin plates or thick, in single sheet form or laminated with plastic. In window glass, Pittsburgh's Pennvernion affords an exceptionally high degree of transparency for a sheet glass.

### STRENGTH



Pittsburgh Glass may now be tempered—a process which greatly increases the toughness, strength, flexibility and resistance of the glass to shock and impact. Tempering makes glass approximately four times as strong and flexible as untempered glass, many times as resistant to shock. The tensile strength of tempered glass (determined as Modulus of Rupture) is 29,500 lbs. per sq. in. of cross section.

continued on next page →



*Modulus of elasticity approx 10,000,000 lbs sq in*

## CHARACTERISTICS OF "Pittsburgh" Glass

### FLATNESS



Of frequent interest to the product designer is the absolute flatness of Pittsburgh Glass. The grinding and polishing technique employed in its manufacture is so efficient that the run-of-mill finished glass has superlative true-ness of surface.

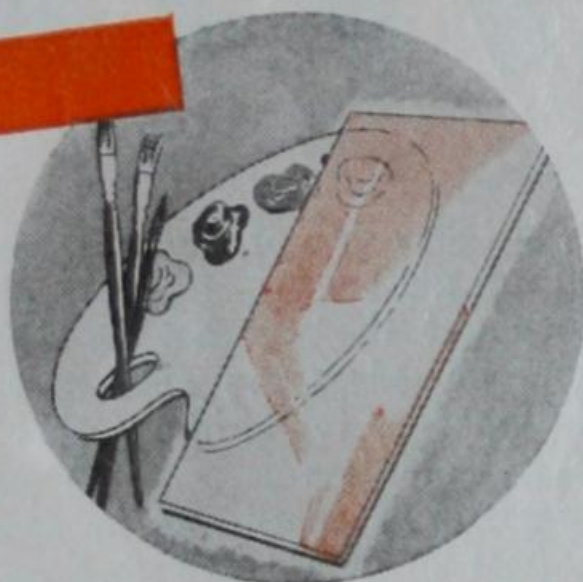
### IMPERVIOUSNESS TO CHEMICALS



Glass is absolutely non-porous and non-absorptive. This means that acids, alkalis, chemicals, liquids of almost every kind affect it not at all... a valuable property in many product applications.

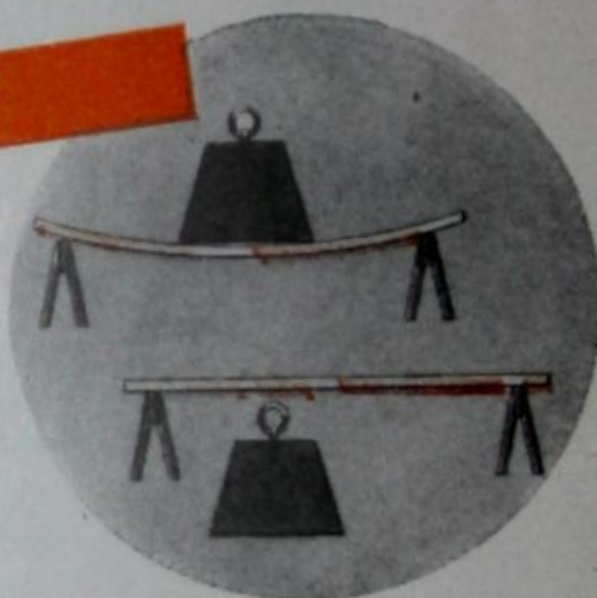
### COLOR

Glass today is available in a wide variety of attractive colors. Transparent plate glass is made in a soft, flesh tint, in rich blue, in cool green, in water white, as well as the ordinary color. Carrara Structural Glass comes in Beige, Ivory, Tranquil Green, Gray, Wine, Forest Green, Rembrandt Blue, Orange, Black and White.



### FATIGUE-PROOF

Although glass possesses surprising flexibility and elasticity, especially when tempered, it is fatigue-proof—that is, after being flexed, a light of glass always returns exactly to its original shape.



### RESISTANCE TO THERMAL SHOCK



The tempering process which gives glass its great strength also substantially increases its resistance to thermal shock. Thus, Pittsburgh Glass can be made to withstand continuous temperatures of 650° F. and an instantaneous thermal shock of 400° to 450° F.

### ADAPTABILITY TO BENDING



In recent years, research and experimentation have resulted in advanced methods of bending and shaping glass. Shapes formerly thought impossible can now be achieved, both in single and laminated sheets of glass.

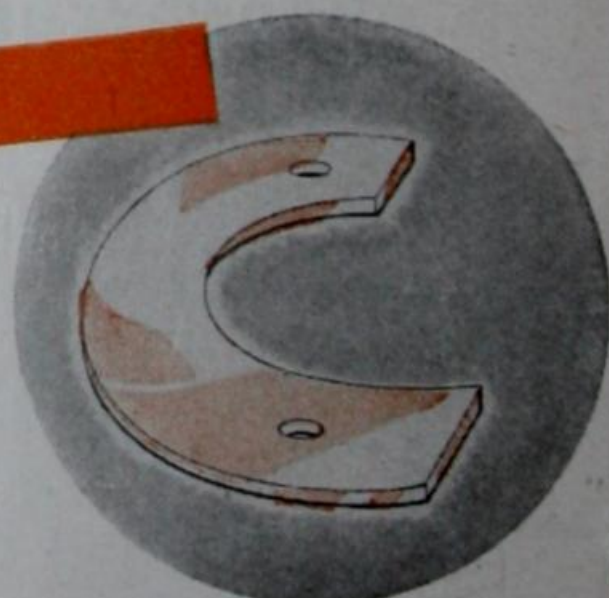
### RESISTANCE TO ABRASION

The surface structure of glass is hard, dense, smooth and brilliant. It is, therefore, exceptionally resistant to abrasion and surface scratches. Depending on the glass product, hardness ranges from 5.5 to 7 (Mohs' scale).



### FABRICATION

Pittsburgh Glass can be cut to pattern, drilled with holes, notched and edge-finished depending upon your requirements. The fabrication possibilities of glass have developed with amazing rapidity in recent years.





## VARIETY OF THICKNESSES

Pittsburgh Glass is available in a wide range of thicknesses from .042 inch up to 1½ inches in single sheets. In laminated form, of course, even greater thicknesses are available.

## DECORATIVE SURFACE TREATMENTS

The surface of Pittsburgh Glass, whether transparent plate glass or opaque structural glass, can be decorated by sand-blasting, acid etching, mud grinding and honing, engraving, "Italian" processing, ceramic enameling, photo etching, chipping, and shading. It can be furnished with a brilliant, accurately reflective finish or with a softer "Suede" finish.

## SOLAR PROPERTIES

There is a Pittsburgh Glass that absorbs 55% of the total solar heat while transmitting 70% of the solar light. There are others which filter out a substantial portion of the sun's ultra-violet rays. Others which filter out infra-red rays.

## SAFETY

Pittsburgh Glass combines clear, undistorted visual qualities with outstanding protective features. Tempered glass provides four to five times the protection against shattering found in ordinary untempered glass. And Pittsburgh laminated safety glasses, ranging from ⅛ inch thicknesses up to the heavy bullet-resisting glasses, provide outstanding protection in a multitude of applications.

## DIELECTRIC PROPERTIES

Glass has unique dielectric properties. It is an inert material with high insulation value, making it ideal for many product applications involving electricity.

## SANITATION

Pittsburgh Glass is non-porous and non-absorptive, and has a hard, smooth, dense surface. It is, therefore, exceedingly sanitary, and easy to keep clean.

## HEAT TRANSMISSION

Glass has lower heat transmission than most metals. Depending on the glass product, its thermal conductivity (K) at 120 ° F. ranges from 4.64 to 6.674 B.T.U. per sq. ft. per hr. per inch of thickness per degree F.

## PERMANENCE

The physical characteristics of glass are such as to make it a durable, permanent material. Its resistance to abrasion, thermal shock, chemicals, fumes, fatigue, corrosion, etc., is now supplemented by its sheer strength and toughness achieved by tempering. Further, the colors in glass remain uniform and unfading year after year.

## EXPANSION

Glass has a very low coefficient of expansion. Depending upon what glass product is used, its coefficient of linear expansion ranges from (°C),  $7.30 \times 10^{-6}$  to  $8.34 \times 10^{-6}$ ; (°F.), from  $4.05 \times 10^{-6}$  to  $4.63 \times 10^{-6}$ .



# CHECK LIST OF PITTSBURGH GLASS PRODUCTS

PRODUCT	QUALITIES	THICKNESSES	MAX. SIZES	WEIGHTS PER SQ. FT.	STRENGTH	COLORS	FINISH
Polished Plate Glass	Silvering Mirror Glazing Glazing	$\frac{1}{8}$ " $\frac{3}{16}$ " $\frac{1}{4}$ "	$\frac{1}{8}$ " 72x123 $\frac{3}{16}$ " 123x216 $\frac{1}{4}$ " 160x220 150x260	$\frac{1}{8}$ " 1.75 lbs. $\frac{3}{16}$ " 2.67 lbs. $\frac{1}{4}$ " 3.29 lbs.	Tension 6500 lbs. [""] Compression 36,000 lbs. [""] Modulus Elasticity 10,000,000 lbs. [""]	Clear	Ground and Polished
Vista Plate Glass	Silvering Mirror Glazing Glazing	$\frac{1}{8}$ "	72x123 (Sizes over 7 sq. ft. not recommended for exterior glazing)	1.75 lbs.	In direct proportion to the square of the thickness	Clear	Ground and Polished
Heavy Plate Glass	Commercial Selected	$\frac{3}{8}$ " $\frac{1}{2}$ " $\frac{5}{8}$ " $\frac{3}{4}$ " $\frac{7}{8}$ " 1" $1\frac{1}{4}$ "	$\frac{3}{8}$ " to $\frac{1}{2}$ " 72x160 $\frac{5}{8}$ " to $\frac{3}{4}$ " 72x130 $\frac{7}{8}$ " to $1\frac{1}{4}$ " 70x130	$\frac{3}{8}$ " 4.93 lbs. $\frac{1}{2}$ " 6.58 lbs. $\frac{5}{8}$ " 8.22 lbs. $\frac{3}{4}$ " 9.67 lbs. $\frac{7}{8}$ " 11.52 lbs. 1" 13.16 lbs. $1\frac{1}{4}$ " 16.45 lbs.	In direct proportion to the square of the thickness	Clear	Ground and Polished
Blue Plate Glass	Selected only	$\frac{3}{16}$ "	123x216	2.67 lbs.	Same as regular plate glass	Blue	Ground and Polished
Flesh Tinted Plate Glass	Selected only	$\frac{3}{16}$ "	123x216	2.67 lbs.	Same as regular plate glass	Flesh Tinted	Ground and Polished
Twindow Insulating Units	Plate Glass— Glazing Window Glass— "A" Rolled Glass— Standard	Double-Glazed Unit: $\frac{1}{4}$ " Airspace $\frac{1}{8}$ " glass— $\frac{1}{2}$ " $\pm \frac{1}{32}$ " $\frac{1}{4}$ " glass— $\frac{1}{8}$ " $\pm \frac{1}{32}$ " $\frac{1}{2}$ " Airspace $\frac{1}{8}$ " glass— $\frac{1}{8}$ " $\pm \frac{1}{32}$ " $\frac{1}{4}$ " glass— $1\frac{1}{16}$ " $\pm \frac{1}{32}$ "	Double-Glazed Unit: $\frac{1}{8}$ "—12 sq. ft. $\frac{1}{4}$ "—70 sq. ft.	Double-Glazed Unit: $\frac{1}{8}$ " 3 $\frac{1}{2}$ lbs. $\frac{1}{4}$ " 7 lbs.	Write for details	Dependent on glass used	Same as glass used
Duplate Safety Plate Glass		$\frac{1}{4}$ "	48x84	3.25 lbs.	Write for details	Clear	Ground and Polished
Duolite Safety Sheet Glass		SS & SS $\frac{7}{16}$ " SS & DS $\frac{1}{2}$ " DS & DS $\frac{3}{4}$ "	48x84 48x84 48x84	2.84 lbs. 3.08 lbs. 3.34 lbs.	Write for details	Clear	Fire- finished
Aerolite Safety Sheet Glass		$\frac{1}{8}$ "	32x42	1.62 lbs.	Write for details	Clear	Fire- finished
Multiplate Bullet-Resisting Plate Glass	Commercial	$\frac{1}{2}$ " minimum $\frac{3}{4}$ " minimum $\frac{7}{8}$ " minimum 1" minimum Super $1\frac{1}{8}$ " min. Hi-Resist $1\frac{1}{2}$ " min. Hi-Power 2" min.	48x96	$\frac{1}{2}$ " 6.91 lbs. $\frac{3}{4}$ " 10.30 lbs. $\frac{7}{8}$ " 11.90 lbs. 1" 13.57 lbs. $1\frac{1}{8}$ " 15.23 lbs. $1\frac{1}{2}$ " 21.70 lbs. 2" 27.11 lbs.	For recom- mendations of protection against vari- ous firearms, write us	Clear	Ground and Polished Plate Glass laminated
Solex Heat-Absorbing Plate Glass	Glazing only	$\frac{1}{8}$ " $\frac{1}{4}$ " $\frac{3}{8}$ "	$\frac{1}{8}$ " 123x216 $\frac{1}{4}$ " 123x216 $\frac{3}{8}$ " 72x130	$\frac{1}{8}$ " 1.75 lbs. $\frac{1}{4}$ " 3.29 lbs. $\frac{3}{8}$ " 4.93 lbs.	Same as regular plate glass	Bluish Green	Ground and Polished
X-Ray Lead Glass	Glazing only	5.35 to 7.35 m/m	40x72	5 $\frac{1}{2}$ lbs.	Approx. $\frac{2}{3}$ as strong as plate glass of equal thickness	Golden Yellow	Ground and Polished
Herculite Plate Glass	Same as glass before tempering	Same as glass before tempering	72x108	Same as glass before tempering	Approx. 4 times that of glass of equal thickness which has not been tempered	Same as glass before tempering	Same as glass before tempering
Herculite Doors	Selected	$\frac{3}{4}$ "	72x108	9.67 lbs. plus hardware	Approx. 4 times that of $\frac{3}{4}$ " glass which has not been tempered	Clear	Ground and Polished
Carrara Structural Glass	Selected	Black, $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ ", $\frac{7}{8}$ ", $1\frac{1}{4}$ " White, Gray, Ivory, $\frac{1}{8}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ ", $\frac{7}{8}$ ", $1\frac{1}{4}$ " Tranquil Green, $\frac{1}{8}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ ", Forest Green, Beige, Wine, Rembrandt Blue, Orange, $\frac{1}{8}$ " only	72x130	$\frac{1}{4}$ " 3.29 lbs. $\frac{3}{8}$ " 4.5 lbs. $\frac{1}{2}$ " 5.76 lbs. $\frac{3}{4}$ " 9.87 lbs. $\frac{7}{8}$ " 11.51 lbs. $1\frac{1}{4}$ " 16.45 lbs.	Approx. same as regular plate glass	Tranquil Green, Ivory, Gray, White, Black, Wine, Rembrandt Blue, Orange, Beige and Forest Green (All Opaque)	Ground and Polished one side. $\frac{1}{4}$ " black, $\frac{7}{8}$ " and $1\frac{1}{4}$ " also pol- ished both sides
Pittsburgh Mirrors Regular Copper-Back Structural	Silvering Mirror Glazing Glazing	Fabricated from any thickness of glass	Regular—Up to max. glass size Copper- Back and Structural 86x168	Approx. same as plate glass	Approx. same as plate glass	Plain, Blue, Flesh Tinted, Blue-Green	Silver, gold or gun-metal backing on any color glass
Tapestry Glass	Glazing	$\frac{7}{16}$ "	60x144	2.89 lbs.	Equal to or greater than that of regular plate glass	Translucent Semi-Opaque	Plain, $\frac{7}{16}$ " Polished, $\frac{7}{16}$ "
Pennvernon Window Glass	AA-A-B Greenhouse	Picture .063-.068 Single Strength .087-.095 Double Strength .118-.133 Heavy Sheet $\frac{1}{16}$ "-.187 to .200 $\frac{3}{32}$ "-.212 to .225	Heavy Sheet $\frac{1}{16}$ " up to 50 sq. ft. $\frac{3}{32}$ " up to 60 sq. ft.	Picture 13-14 oz. S.S. 19 oz. D.S. 26 oz. $\frac{3}{16}$ " 40 oz. $\frac{1}{4}$ " 45 oz.	Same as plate glass of equal thickness	Clear	Fire- finished
PC Glass Blocks*	Selected	3 $\frac{7}{8}$ " (hollow)	Actual sizes: 5 $\frac{3}{4}$ "x 5 $\frac{3}{4}$ " 7 $\frac{3}{4}$ "x 7 $\frac{3}{4}$ " 11 $\frac{3}{4}$ "x 11 $\frac{3}{4}$ "		Write for Pitts- burgh Corning catalog on PC Glass Blocks	Clear	Moulded

\*(Mfd. by Pittsburgh Corning Corp.—Dist. by Pittsburgh Plate Glass Company)

**PITTSBURGH PLATE GLASS COMPANY, GRANT BLDG., PITTSBURGH 19, PA.**



**ADVANTAGES**

***CITE***





# CHECK LIST OF PITTSBURGH GLASS PR

PRODUCT	QUALITIES	THICKNESSES	MAX. SIZES	WEIGHTS PER SQ. FT.	STRENGTH
Polished Plate Glass	Silvering Mirror Glazing Glazing	$\frac{1}{8}$ " $\frac{3}{16}$ " $\frac{1}{4}$ "	$\frac{1}{8}$ " 72x123 $\frac{3}{16}$ " 123x216 $\frac{1}{4}$ " 160x220 150x260	$\frac{1}{8}$ " 1.75 lbs. $\frac{3}{16}$ " 2.67 lbs. $\frac{1}{4}$ " 3.29 lbs.	Tension 6500 lbs. Compr 36,000 Modul 10,000
Vista Plate Glass	Silvering Mirror Glazing Glazing	$\frac{1}{8}$ "	72x123 (Sizes over 7 sq. ft. not recommended for exterior glazing)	1.75 lbs.	
Heavy Plate Glass	Commercial Selected	$\frac{3}{8}$ " $\frac{1}{2}$ " $\frac{5}{8}$ " $\frac{3}{4}$ " $\frac{7}{8}$ " 1" $1\frac{1}{4}$ "	$\frac{3}{8}$ " to $\frac{1}{2}$ " 72x160 $\frac{5}{8}$ " to $\frac{3}{4}$ " 72x130 $\frac{7}{8}$ " to $1\frac{1}{4}$ " 70x130	$\frac{3}{8}$ " 4.93 lbs. $\frac{1}{2}$ " 6.58 lbs. $\frac{5}{8}$ " 8.22 lbs. $\frac{3}{4}$ " 9.67 lbs. $\frac{7}{8}$ " 11.52 lbs. 1" 13.16 lbs. $1\frac{1}{4}$ " 16.00 lbs.	
Blue Plate Glass	Selected only	$\frac{3}{16}$ "	123x216		
Flesh Tinted Plate Glass	Selected only	$\frac{3}{16}$ "	123x216		
Twindow Insulating Units	Plate Glass— Glazing Window Glass— "A" Rolled Glass— Standard	Double-Glazed Unit: $\frac{1}{4}$ " Airspace $\frac{1}{8}$ " glass— $\frac{1}{2}$ " $\pm \frac{1}{16}$ " $\frac{1}{4}$ " glass— $\frac{1}{10}$ " $\pm \frac{1}{32}$ " $\frac{1}{2}$ " Airspace $\frac{1}{8}$ " glass— $\frac{1}{10}$ " $\pm \frac{1}{32}$ " $\frac{1}{4}$ " glass— $\frac{1}{10}$ " $\pm \frac{1}{32}$ "	Double-Glazed Unit: $\frac{1}{8}$ "—12 sq. ft. $\frac{1}{4}$ "—70 sq. ft.		
Duplate Safety Plate Glass		$\frac{1}{4}$ "	48		
Duolite Safety Sheet Glass		SS & SS $\frac{7}{16}$ " SS & DS $\frac{1}{2}$ " DS & DS $\frac{5}{8}$ "			
Aerolite Safety Sheet Glass		$\frac{1}{8}$ "			
Multiplate Bullet-Resisting Plate Glass	Commercial	$\frac{1}{2}$ " minimum $\frac{3}{4}$ " minimum $\frac{7}{8}$ " minimum 1" minimum Super $1\frac{1}{2}$ " Hi-Resist Hi-Pow			
Solex Heat-Absorbing Plate Glass	Glazing only				
X-Ray Lead Glass	Glazing only				
Herculite Plate Glass	Same as before tem				
Herculite Doors					
Carran Struct Glass					



# 9 ADVANTAGES

*NUCITE*



**GLASS  
CHALKBOARD**



# NUCITE

# Glass Chalkboard

STANDARD COLORS—Green and Black.

SIZES—Minimum 4"x4".  
Maximum 48"x90".

THICKNESS—1/4" plus or minus 1/32" tolerance.

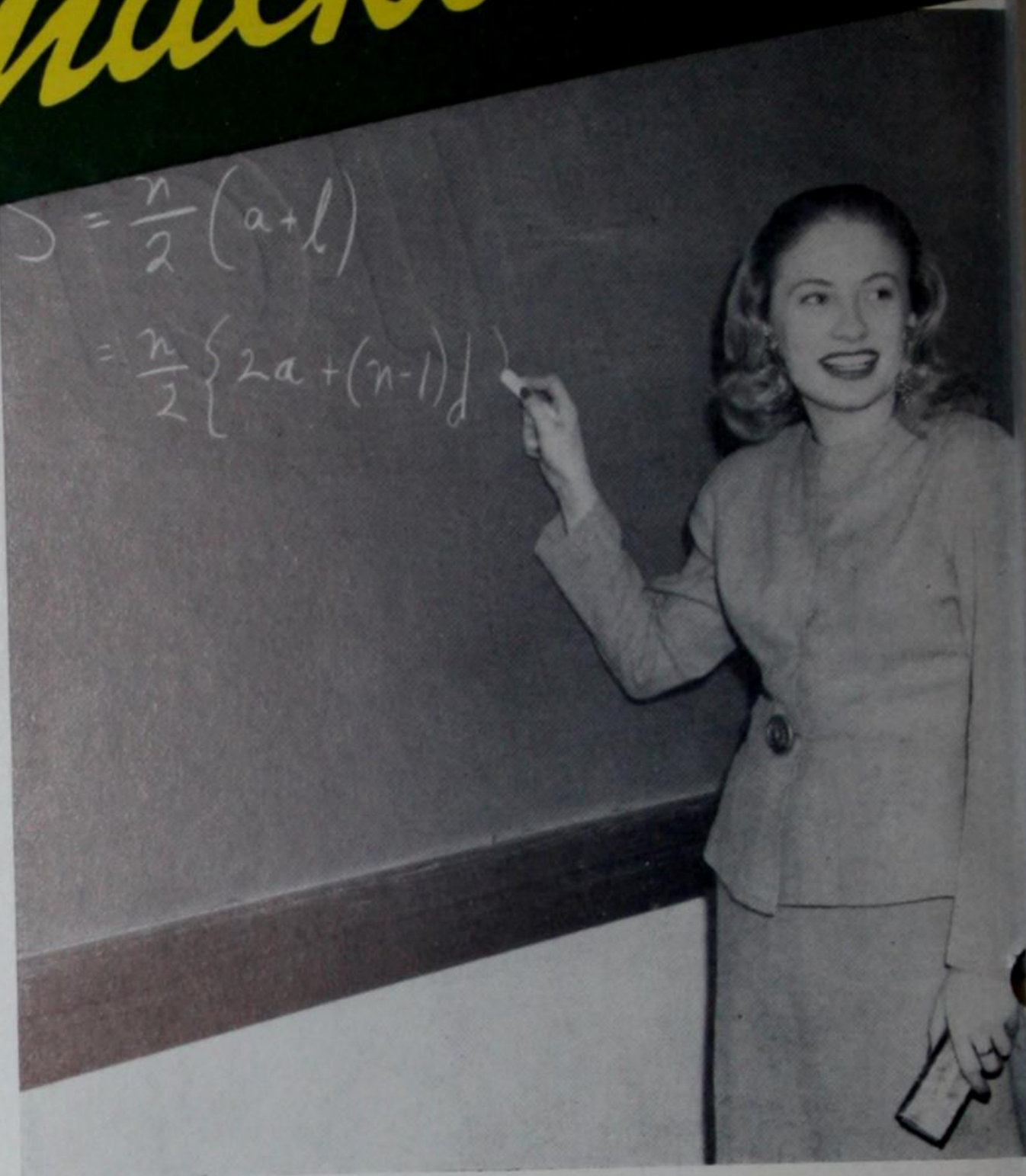
WEIGHT—Approximately 3.32 pounds per square foot.

SHIPPING WEIGHT—Approximately 5.75 pounds per square foot.

SAMPLES—Furnished on request.

$$S = \frac{n}{2}(a+l)$$

$$= \frac{n}{2}\{2a + (n-1)d\}$$



## 9 ADVANTAGES

1. Choice of Black or Green
2. Less eye-strain for students
3. Better lighting for schoolrooms
4. Minimizes glare
5. Excellent, permanent writing surface
6. Easier erasure
7. Shock resistance
8. Odourless and stain-proof
9. Easy installation

### Applications of Nucite

1. Day and night school chalkboards.
2. Industrial, bulletin and production schedule chalkboards.
3. Bowling alley and athletic scoreboards
4. Stock and bond priceboards.
5. Train, bus, and airline schedules.



# YOU CAN'T WEAR IT OUT!

**N**UCITE is a glass chalkboard made by fusing a coloured vitreous material, impregnated with an abrasive, onto the face of polished plate glass.

## COLOURS

Nucite comes in two standard colours—green and black. The Nucite shade of green is scientifically designed to lessen eye-strain for students, minimizing glare and promoting better schoolroom lighting. The use of ivory chalk on green Nucite is a welcome change from the traditional white chalk on blackboards.

## SURFACE

Nucite writing surface takes chalk easily and will never deteriorate with use. The process of fusing the writing surface to the plate glass makes Nucite chalkboards strong, tough and amazingly resistant to shock. If under severe strain or shock it should be fractured, Nucite crumbles instead of breaking in dangerously sharp splinters. Being glass, Nucite is absolutely non-absorbent. The binder in chalk which so often fills up the surface pores of ordinary blackboards, causing unpleasant blackboard odours, cannot cling to Nucite—because it has no pores. It is stain-proof and odour-proof, and its colours will not fade.

Nucite may be washed as many times as desired. It will not become shiny or slick after years of use, the chalk will not skip on its surface and the readability of writing will not suffer with extensive use of the board. Both colours of Nucite are easily and quickly cleaned.

## PREPARATION AND USE

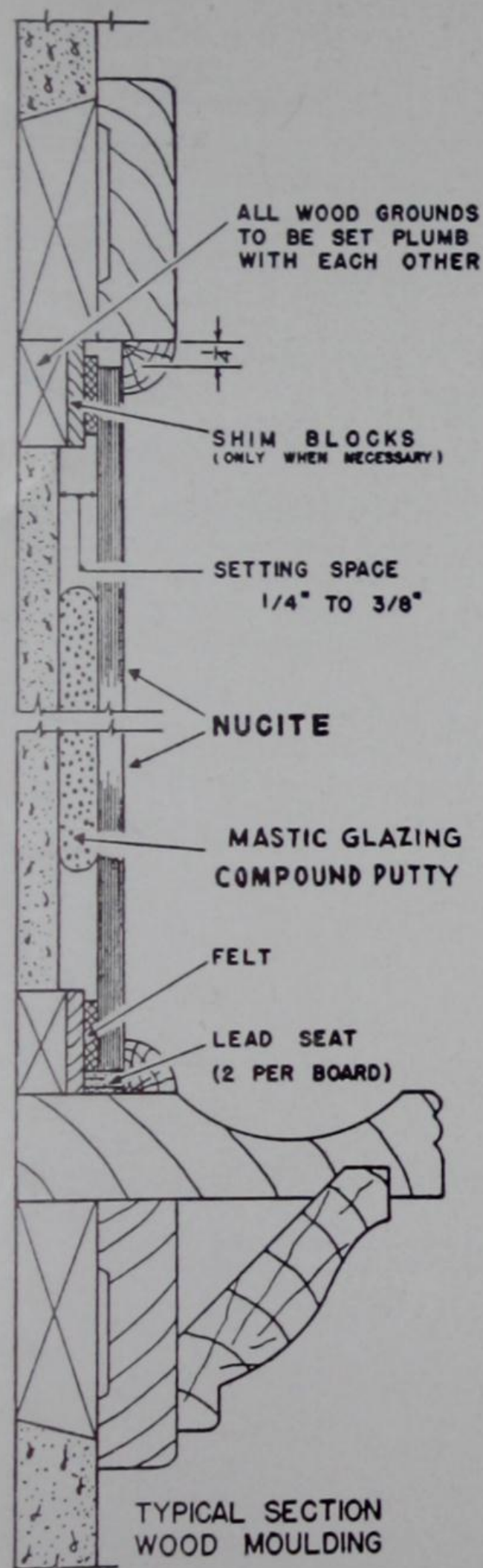
Before attempting to write on Nucite, it must be "broken in" by covering the entire writing surface with chalk (holding the side of the chalk flat against the chalkboard), after which the chalk is erased and the Nucite is ready for use. Ordinary erasing will keep Nucite exceptionally clean but frequent washing cannot harm it. To wash Nucite properly, go over the board once with a sponge and plenty of water, then rinse thoroughly with clean water and a sponge. If it is desired to dry the chalkboard, use a squeegee, operating it in a horizontal direction to prevent the excess water from dripping into the chalk trough.

If Nucite should happen to be marked by wax crayon, paint or any other difficult-to-remove substance, the mark may be easily removed without harming the Nucite. Simply rub the affected part vigorously with soap and powdered kitchen cleanser or hand cleaner until the stain is removed.

## ACCESSORIES

Use wax-free chalk for easy erasure. The American Crayon Company, Sandusky, Ohio, and the Standard Crayon and Manufacturing Company, Danvers, Mass., are among the companies manufacturing wax-free chalk. The former company also manufactures an off-white or sight-saving chalk called Forsyte. These chalks are obtainable through most school supply houses, and should be used to obtain maximum satisfaction from Nucite chalkboards.

Sponge rubber erasers perform well on Nucite, although felt erasers may be more satisfactory if an inferior type of chalk is used.



## How To Specify NUCITE GLASS CHALKBOARD IN COLOURS

### SCOPE OF THE WORK

Furnish and install all chalkboards (blackboards) shown on drawings and specified hereinunder.

The blackboard contractor shall install Nucite chalkboards strictly in accordance with the architect's details, which are a part of these specifications.

### MATERIALS

All chalkboards (blackboards) herein specified or indicated on drawings shall be Nucite chalkboards, and shall be furnished in ..... (specify colour or colours—standard colours are Green and Black.)

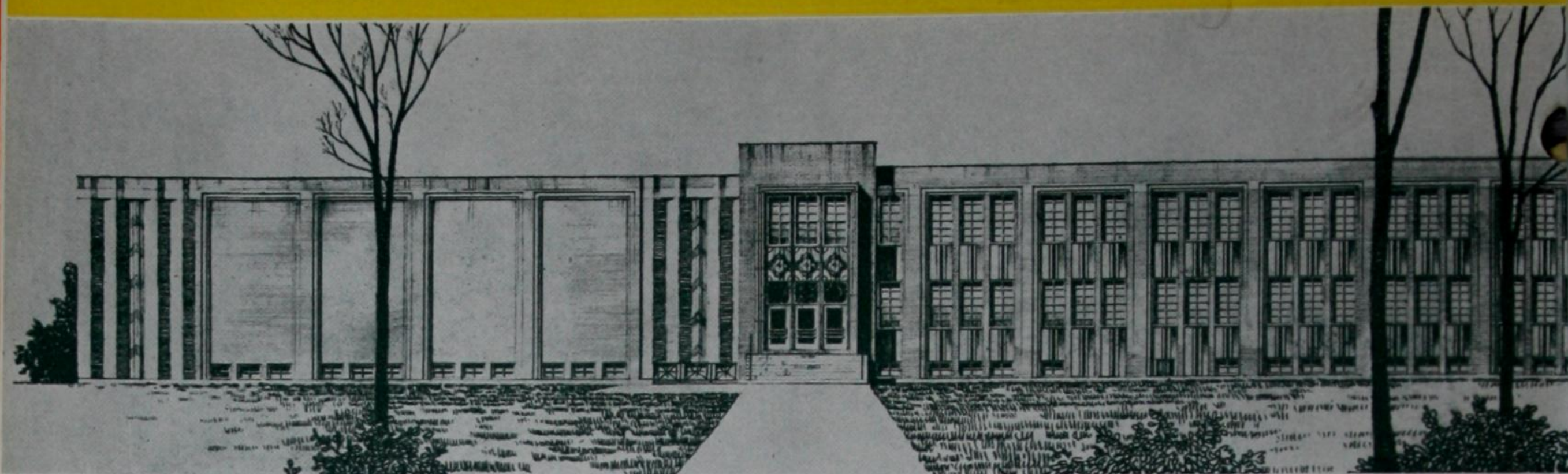
### WORKMANSHIP

All pieces shall be set plumb and true using mastic glazing compound putty. Joints shall be flush and even. Where abutting joints occur in chalkboard sections, those edges of glass shall be finished square and true and are to be fitted together as closely as possible. The joints shall be filled and pointed with a material approved by the chalkboard manufacturer.

At the completion of the work contemplated under this contract, this contractor shall thoroughly clean the chalkboards and leave his work in neat, orderly and acceptable condition. This contractor shall remove only the rubbish directly applicable to his part of this contract.



# BETTER LIGHTING FOR SCHOOL ROOMS



Luke, Little and Mace, Architects, Montreal, who drew the plans for this Modern School in Buckingham, Que., specified Nucite

**Among numerous users of Nucite are:**

**Lac du Bonnet School (architects: Messrs. Moody & Moore, Winnipeg).**

**Red Rock School (architects: Messrs. Craig & Madill, Toronto.)**

**Utterson School (architects: Messrs. Forsey Page & Steele, Toronto.)**

This experimental building, paid for by the Ontario Government, is the result of two years' research by a committee on schools appointed by the Governor-General.

**University of Saskatchewan.**

**University of Western Ontario.**

**Queen's University.**

**Fallsvew Consolidated School (architect: Mr. R. I. McBeth, St. Catharines.)**

**Staff House, Canada Packers Ltd., St. Boniface, Manitoba.**

**Alma College, St. Thomas, Ontario.**

**Kensall Park School, Springbank, (architect: W. G. Murray— contractor: McKay-Cocker Construction Limited).**



John Burnett Parkin, Architect, Toronto, specified 2,400 square feet of Nucite in this Vocational School at New Toronto, Ontario.  
For further information on NUCITE and other fine glass products come to:

PS1-TAL-2-4



BRANCHES FROM COAST TO COAST



# HOBBS

# GLASS CHALKBOARD

*NUCITE*

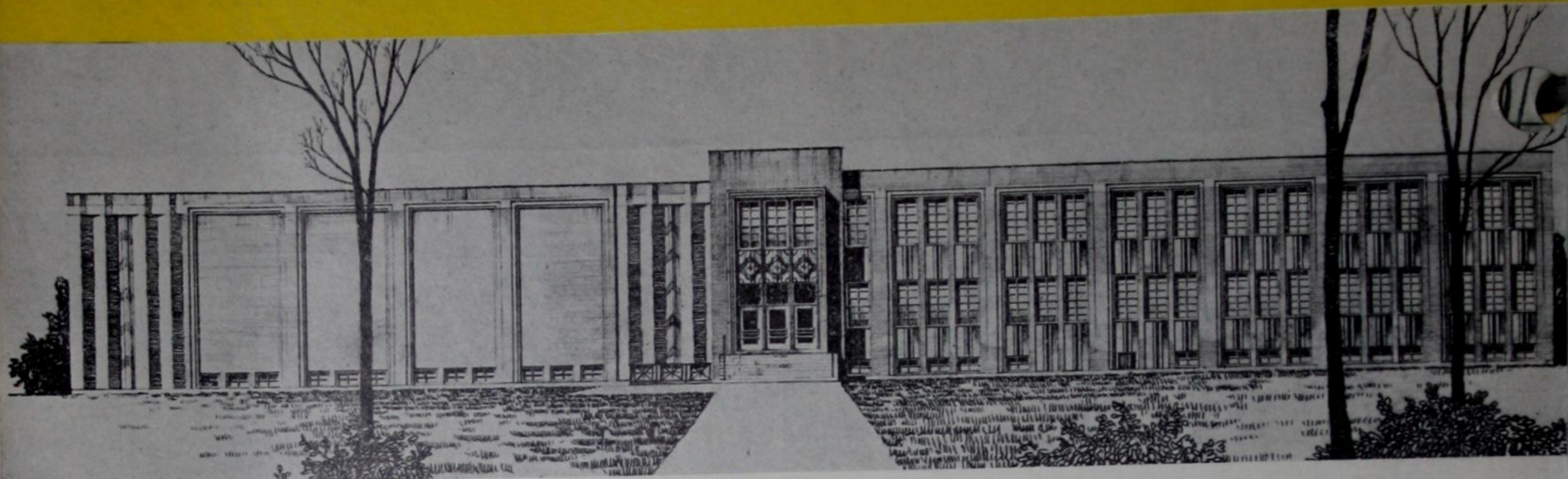


# 9

## ADVANTAGES



Look to **GLASS** for better Living . . . come to **HOBBS** for glass!



Luke, Little and Mace, Montreal, who drew the plans on this Modern New School in Buckingham, Que., specified Hobbs Nucite.

Among numerous users of Nucite are:

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Beardmore School (architect: Mr. H. Scott, Ft. William).

Red Rock School (architects: Messrs. Craig & Madill, Toronto.)

Dryden School (architect: Mr. Fred Warren, Hamilton.)

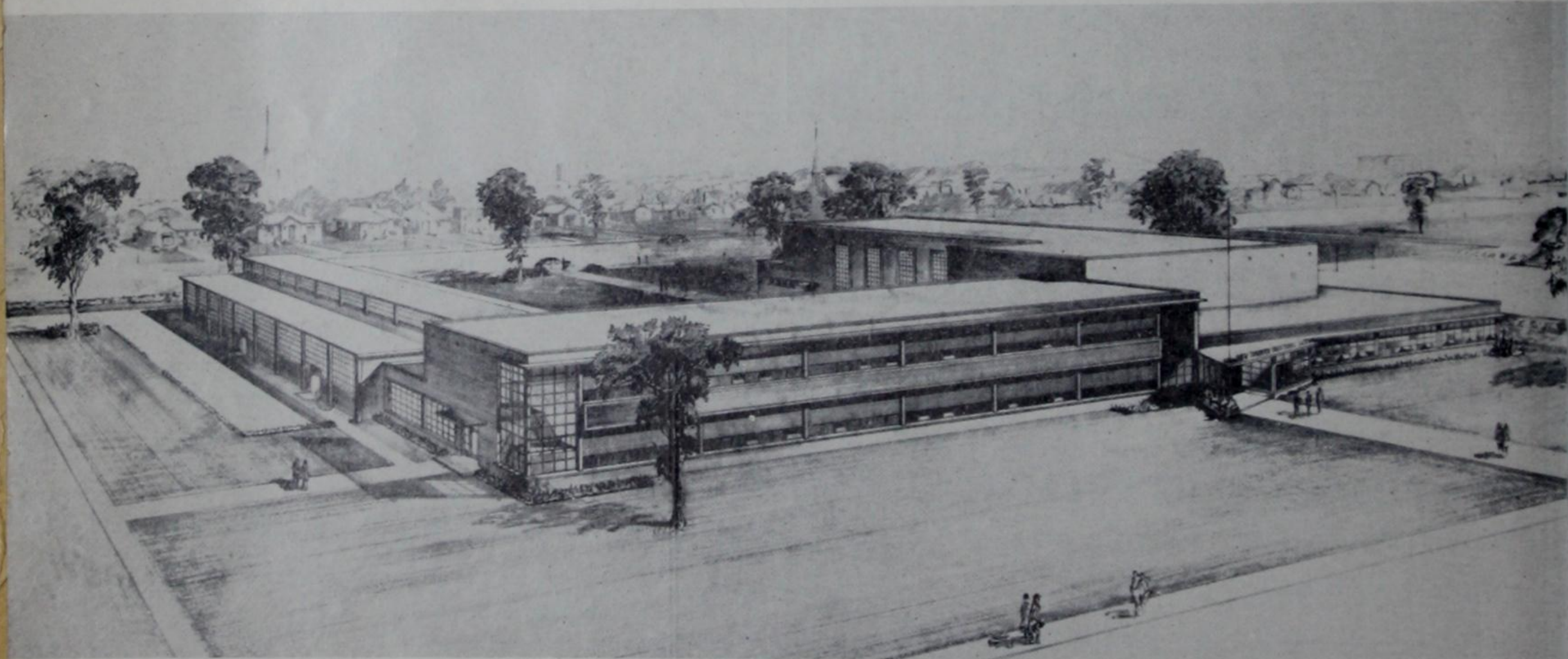
Utterson School (architects: Messrs. Forsey Page & Steele, Toronto.)

This experimental building, paid for by the Ontario Government, is the result of two years' research by a committee on schools appointed by the Governor-General.

University of Saskatchewan, University of Western Ontario, Queen's University.

Fallsview Consolidated School (architect: Mr. R. I. McBeth, St. Catharines.)

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RT

a completely new daylighting

for red

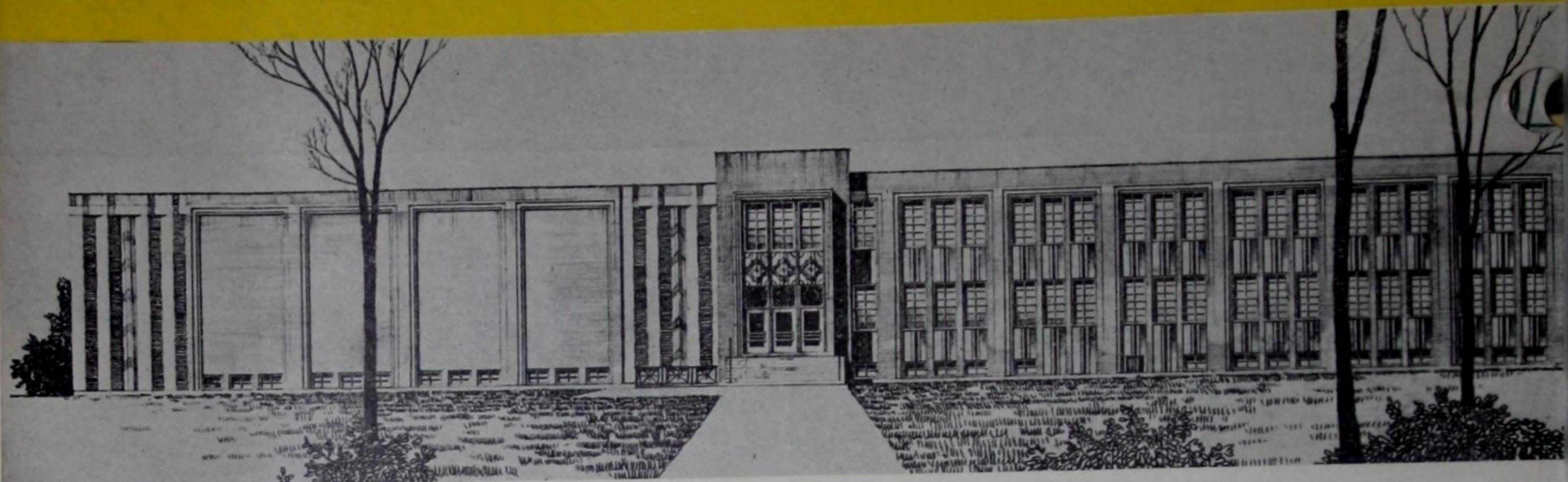


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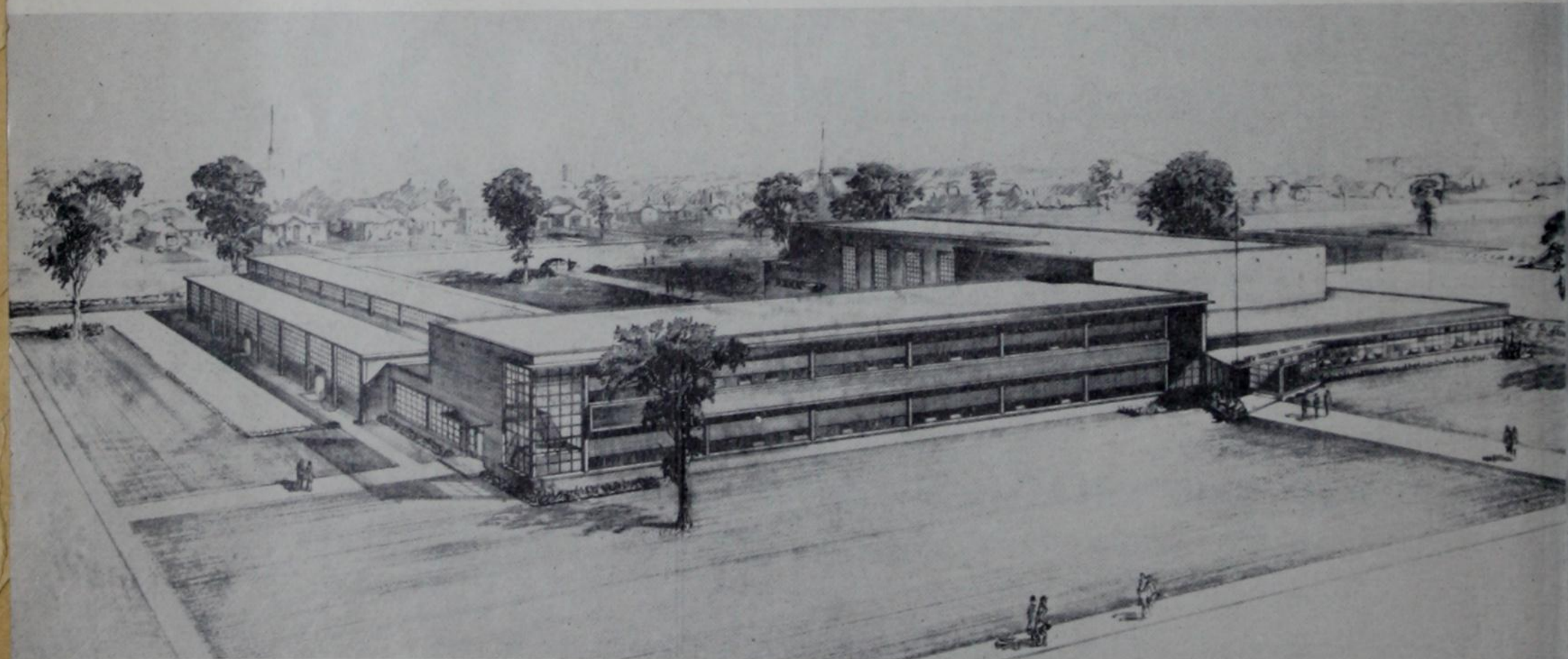
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a completely new daylighting medium

for reduction of glare and heat

# Suntr Glass Blo

by PITTSBURGH CORNING



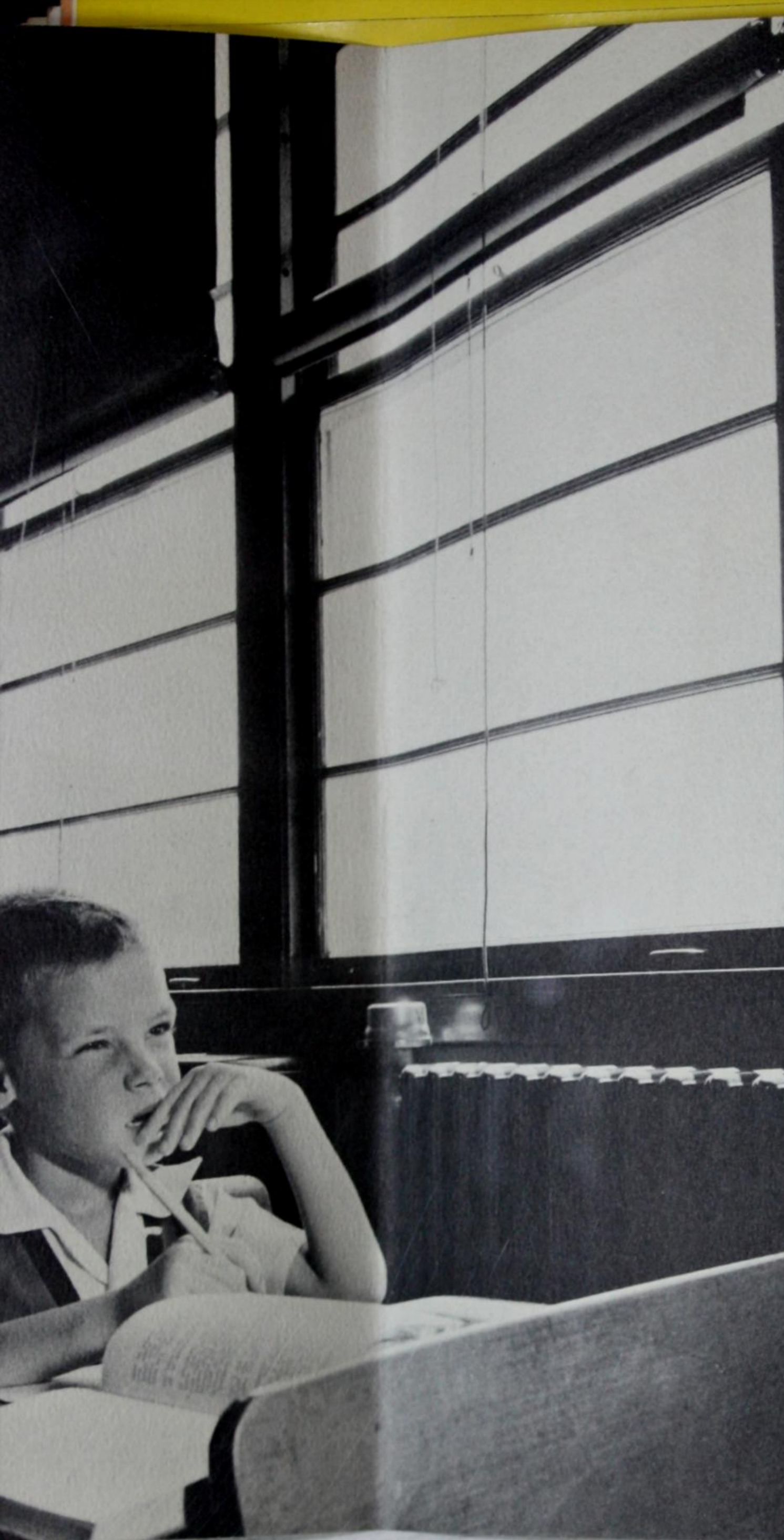
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A.I.A. FILE NO. 10-F

Pittsburgh Corning Corporation





## What Suntrol\* Blocks do . . .

The standard line of functional PC Glass Blocks is a careful balance between maximum usable illumination and low panel brightness — under average exterior daylighting conditions. In fact, there is no other simple method of fenestration that will give such high illumination along with such a low brightness level. PC Functional Glass Blocks are the perfect answer for 9 out of 10 installations where “average” conditions exist. The new Suntrol Blocks described in this booklet are designed for that one building out of 10 where average conditions do not exist.

For example: we have encountered many rooms that overlooked a blinding white concrete parking area. If a southern exposure, the sun bounces off the ground with a ferocity that defies ordinary efforts to keep it under control. The heat and glare, even through a glass block panel, can become uncomfortable.

\*T.M. Reg. Applied for.

Many a schoolchild has squinted against the brutal unshaded sun. Usually the only alternative is the funereal gloom of drawn window shades.



By reducing heat and glare, PC Suntrol blocks permit more liveable rooms even though they are in a bad daylight location.

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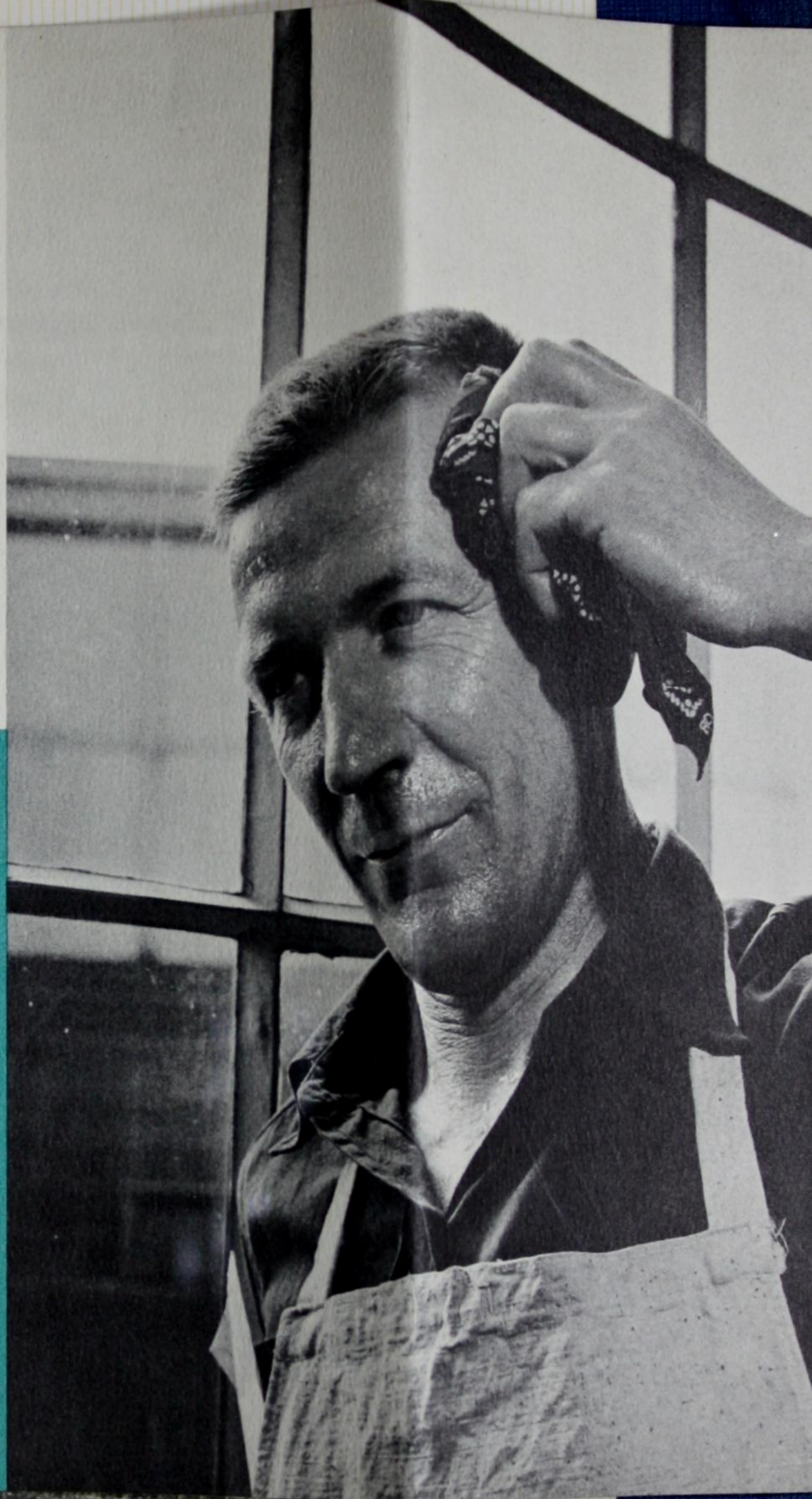
The problem exists even in the far north, only *snow* is the culprit, instead of the sun. If snow lies on the ground for long periods, it can cause a painful glare problem. Standard PC Glass Blocks do a good job. But the new Suntrol Blocks are even better.

Suntrol Blocks contain a pale green fibrous glass diffusing screen that reduces the intensity of glare and heat. The screen divides the block into two insulating cavities. Construction is shown on the following pages. Suntrol Blocks have about 35% less brightness and 25% less instantaneous heat gain than standard glass blocks.

Suntrol Blocks do *not* replace the present line of PC Functional Glass Blocks. But for those special locations where heat and glare are a problem, Suntrol Blocks are the best answer yet to the long search for perfect daylighting and comfort.

Raw sunlight can create intolerable heat, and drastically reduce the efficiency and morale of workers.

Suntrol Blocks pay off in terms of more comfortable, more productive workers. They cost no more than standard PC Functional Glass Blocks.

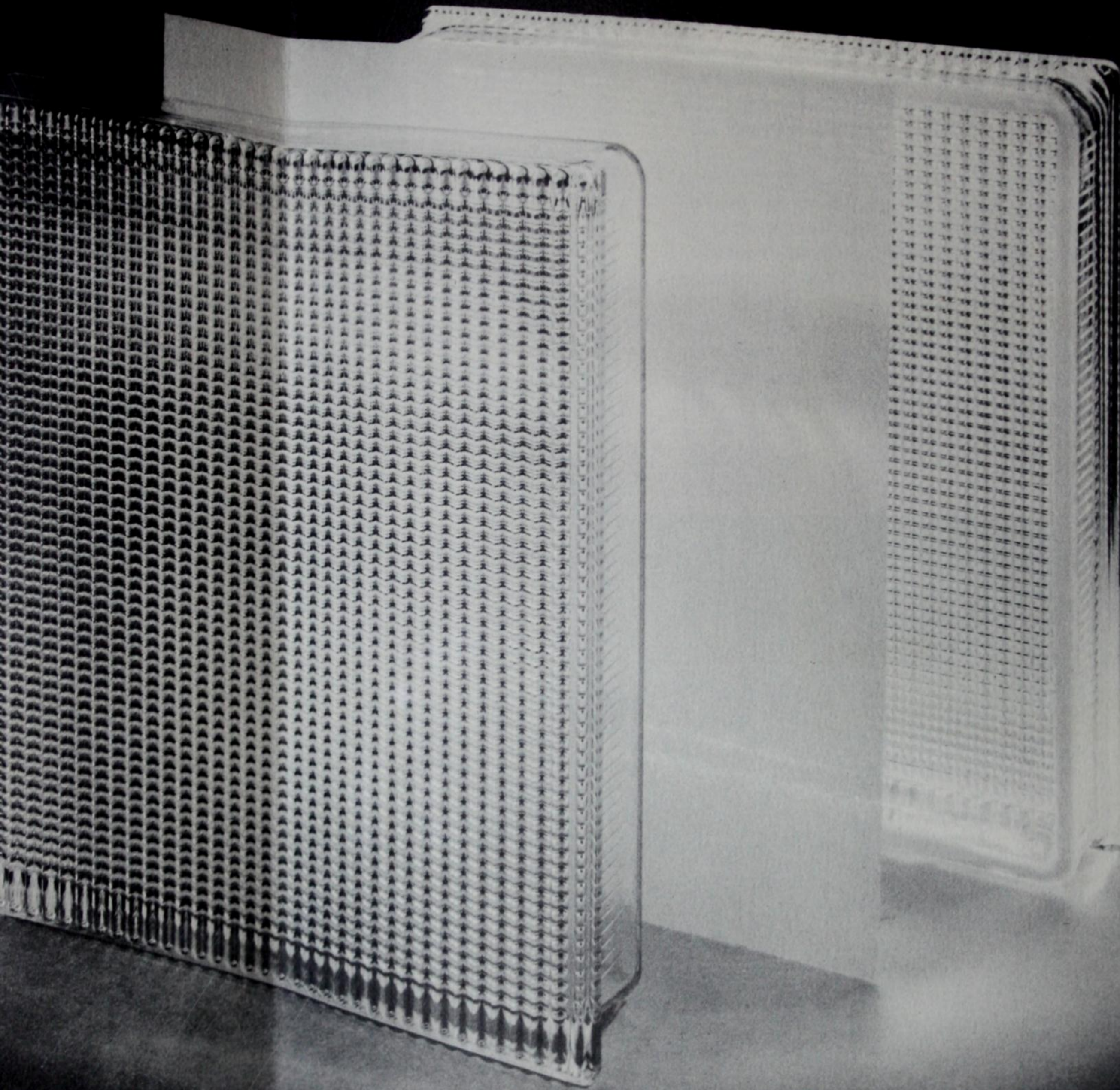


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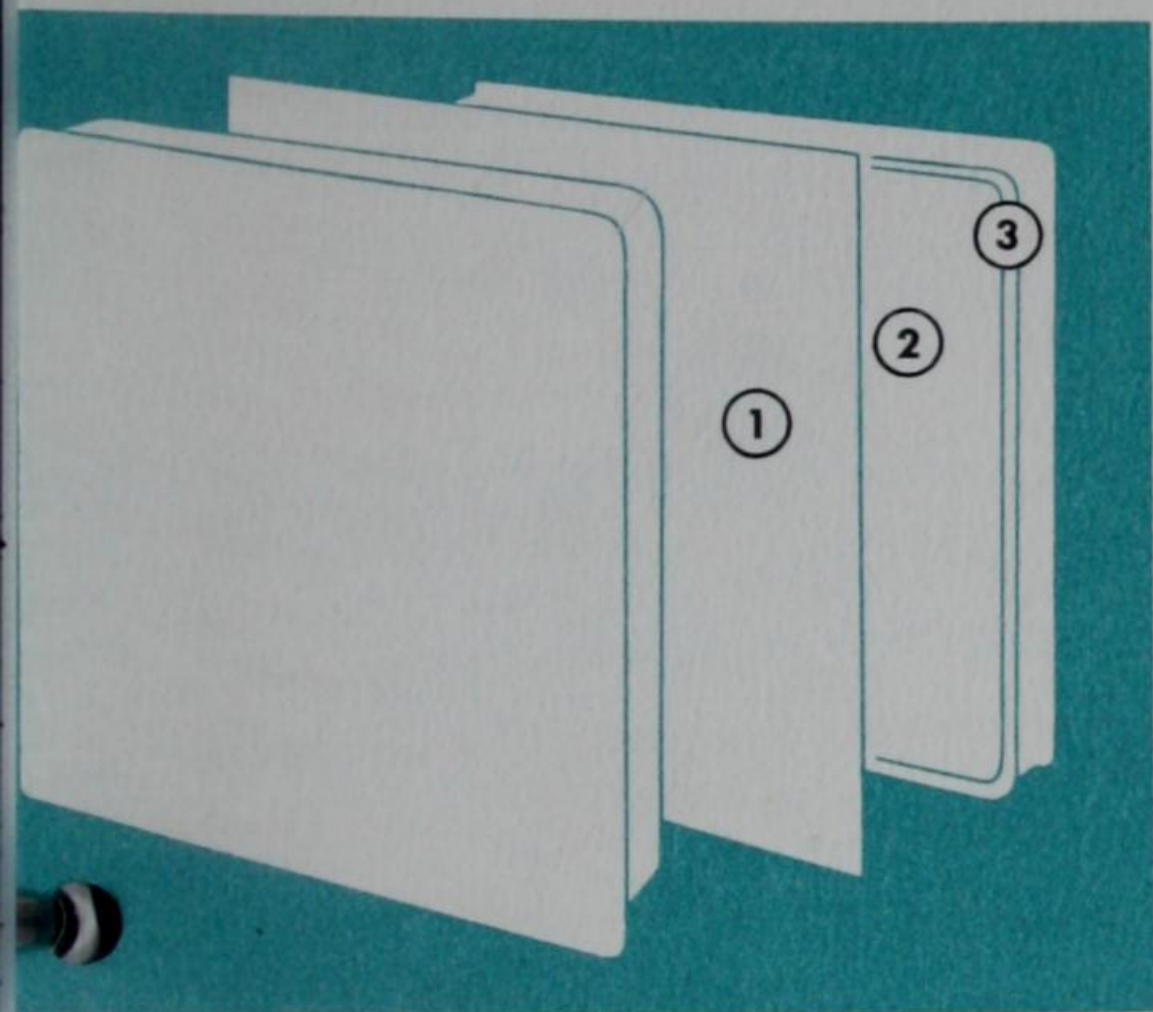


## the secret of SUNTROL

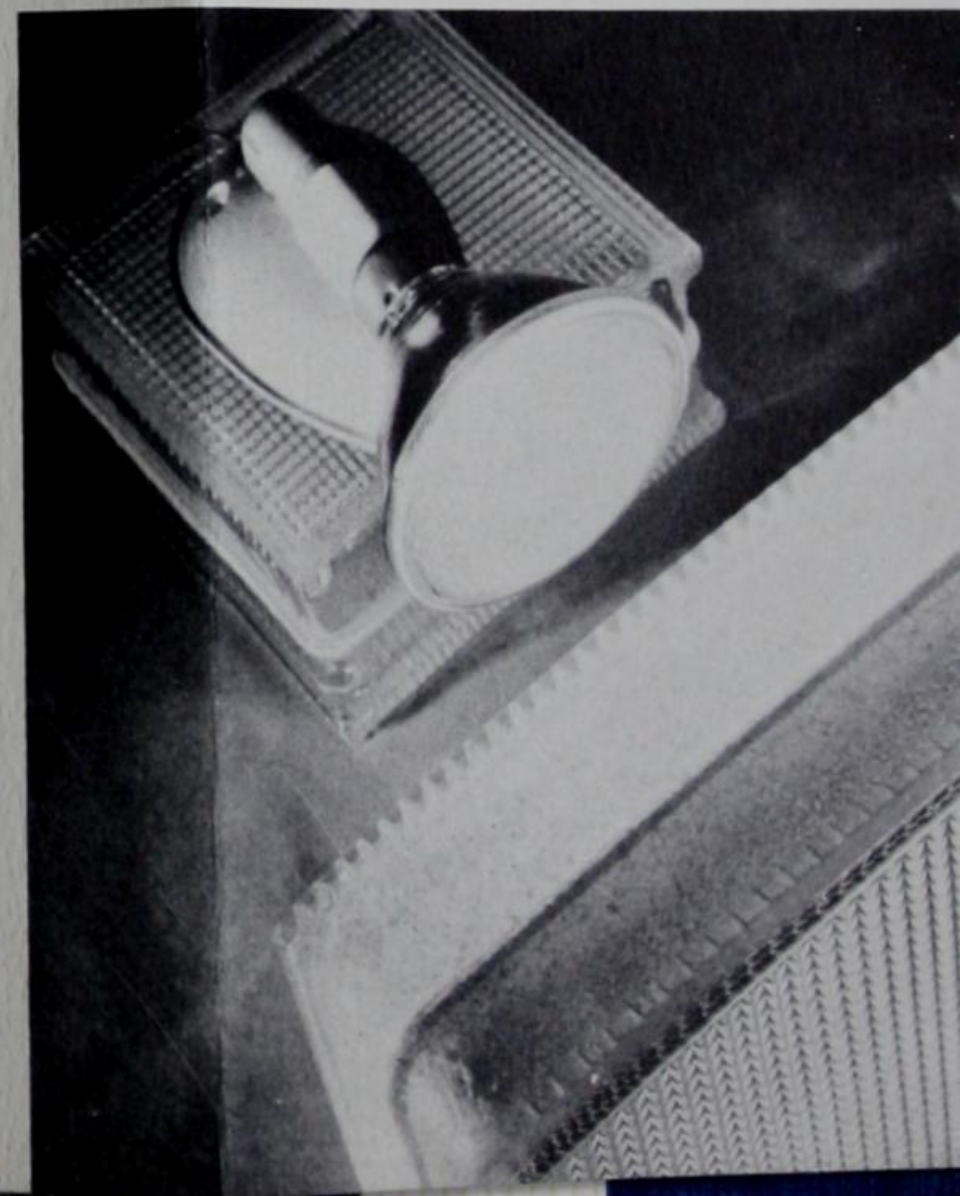
The big picture illustrates the principle of Suntrol Block construction. The green, fibrous glass diffusing screen (1) softens the light and reduces the intensity. Internal prisms cast into the glass (2) throw the light upward onto the ceiling in light-directing patterns used above eye level; or they diffuse the light in all directions for light-diffusing patterns.

Especially notice the opal glass edge that is sealed between the two block halves (3). This prevents unfiltered light from reaching the panel interior through the edge of the block. This is the Soft-Lite® Edge—an exclusive PC feature.

The double cavity construction of Suntrol Blocks reduces heating and cooling costs. Since a partial vacuum exists in each cavity, the block acts as an insulator. On the whole, a PC Glass Block panel (Suntrol or regular) has the insulating efficiency of an 8-inch masonry wall—*twice* the insulating efficiency of ordinary windows.



This picture shows the action of the Suntrol screen. The spotlight simulates sunlight. Notice how the bright light goes through the outer half of the block. But notice, also, that the light intensity is reduced after passing through the Suntrol screen. This soft, diffused light is what you get on the inside of a Suntrol panel.



®

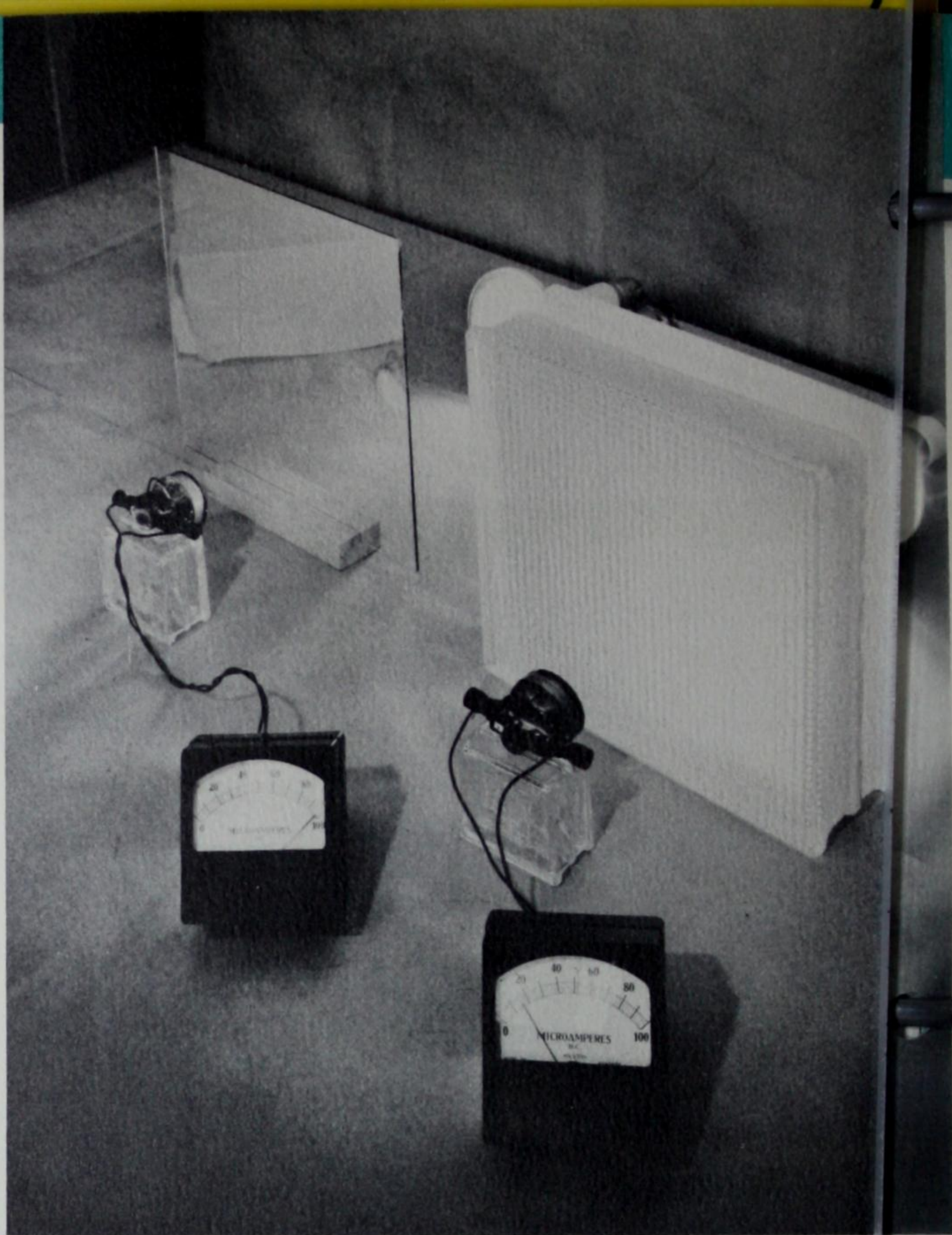
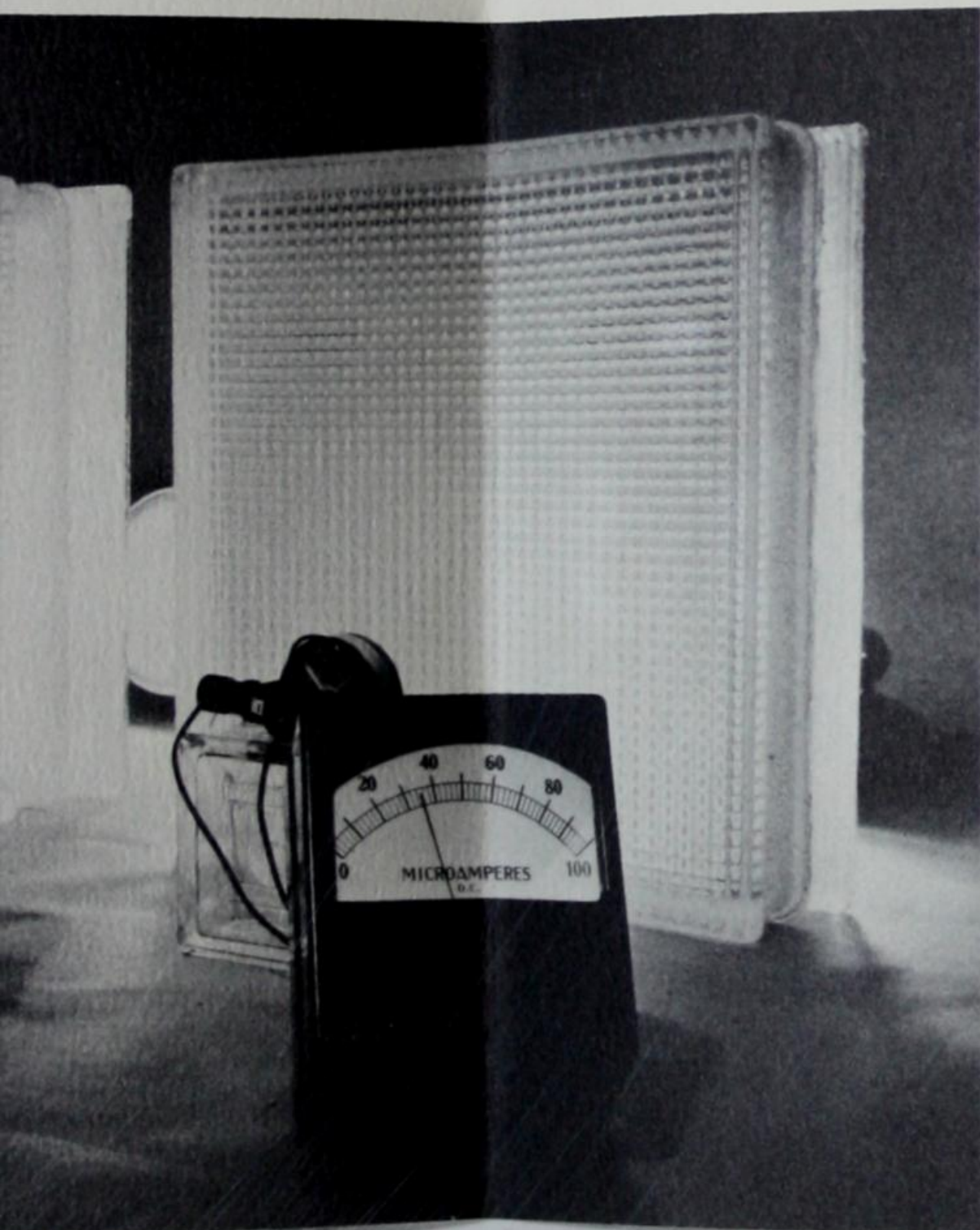
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## GLARE REDUCTION:

Photocells were used to make sure that each light picture had the same brightness. The brightness reading through the flat glass is 97 (simply a reference point). Through the Suntrol Block, the same intensity light source reads 16. This is a 6:1 reduction of brightness.



In this picture, the Suntrol Block is at the right, and a conventional PC Functional Glass Block is at the left. The conventional block has a brightness of 59, but the Suntrol Block brightness is only 35.

John Burnett Parkin, Toronto, specified 2,400 square feet of Hobbs Nucite in this Vocational School at New Toronto, Ontario.  
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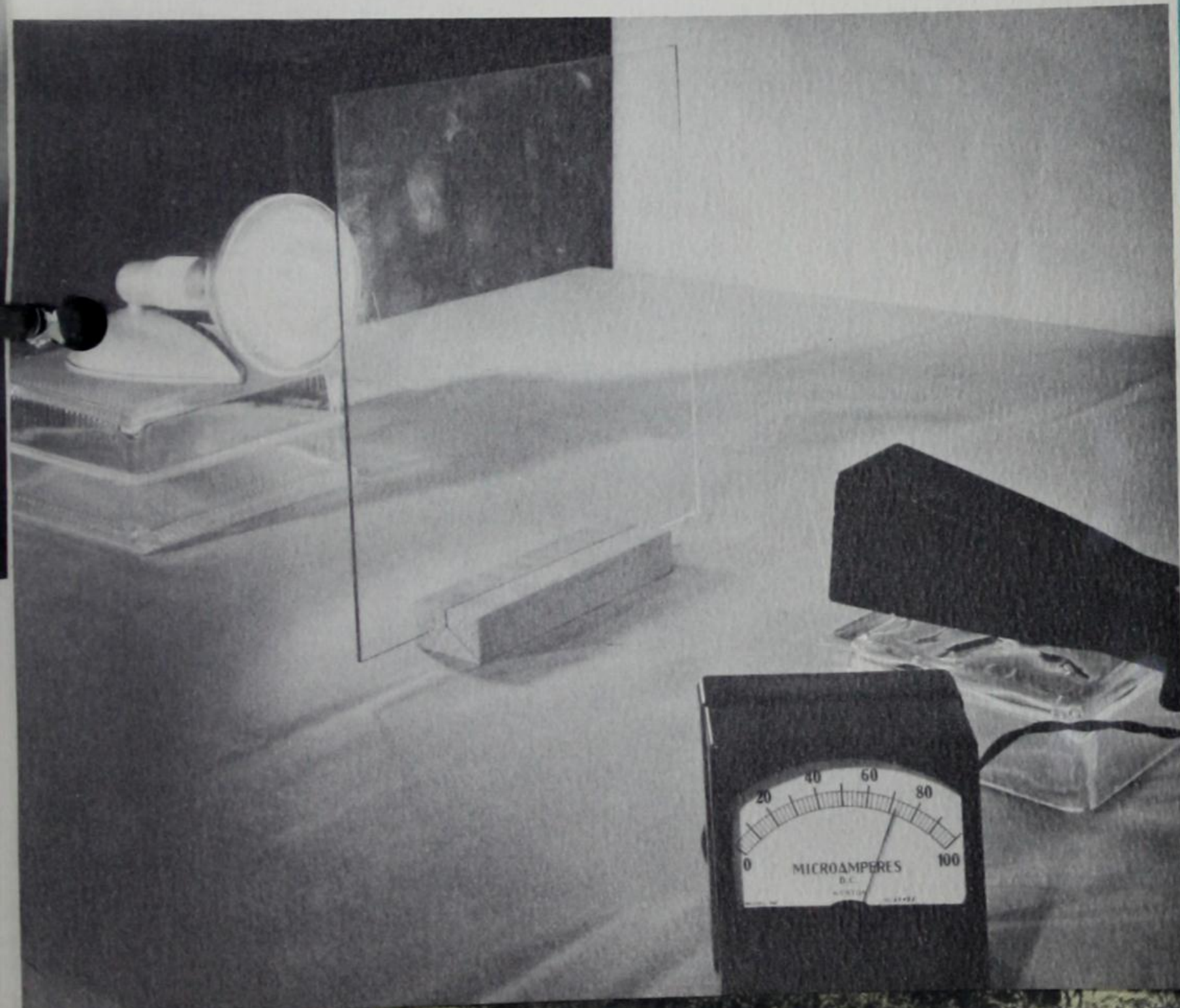


# Laboratory instruments tell the story

## HEAT REDUCTION:

The long rectangular instrument is a radiometer. It measures radiant heat. This is not a precise measurement of heat gain, but it is a good guide to the human comfort factor. Through flat glass, the light source gives a radiant heat rating of 72.

Through the Suntrol Block, the same intensity light source gives a radiant heat reading of only 5. This is the instantaneous radiant heat you actually *feel* through the panel. Look closely, and you can see the filtering action of the Suntrol screen through the block.



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## Suntrol patterns

are available in three different patterns: 1) Prism B, for use *above* eye level, 2) *light-* and 3) Skytrol, for use in toplighting systems.  $\frac{3}{4}$ " square,  $\frac{3}{8}$ " thick.

## Performance data

el brightness and instantaneous heat gain, have the same characteristics as standard 12" glass blocks. "U" value is 0.44. Also, due to changes in the glass molds, Suntrol Blocks the impact strength of standard functional complete information on all PC Glass Blocks, Catalog GB-101.

### District Offices:

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Murrayhill 8-8350

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# Suntrol Glass Blocks

PITTSBURGH CORNING  
CORPORATION

One Gateway Center, Pittsburgh 22, Pa.

GB 103 M-9-5

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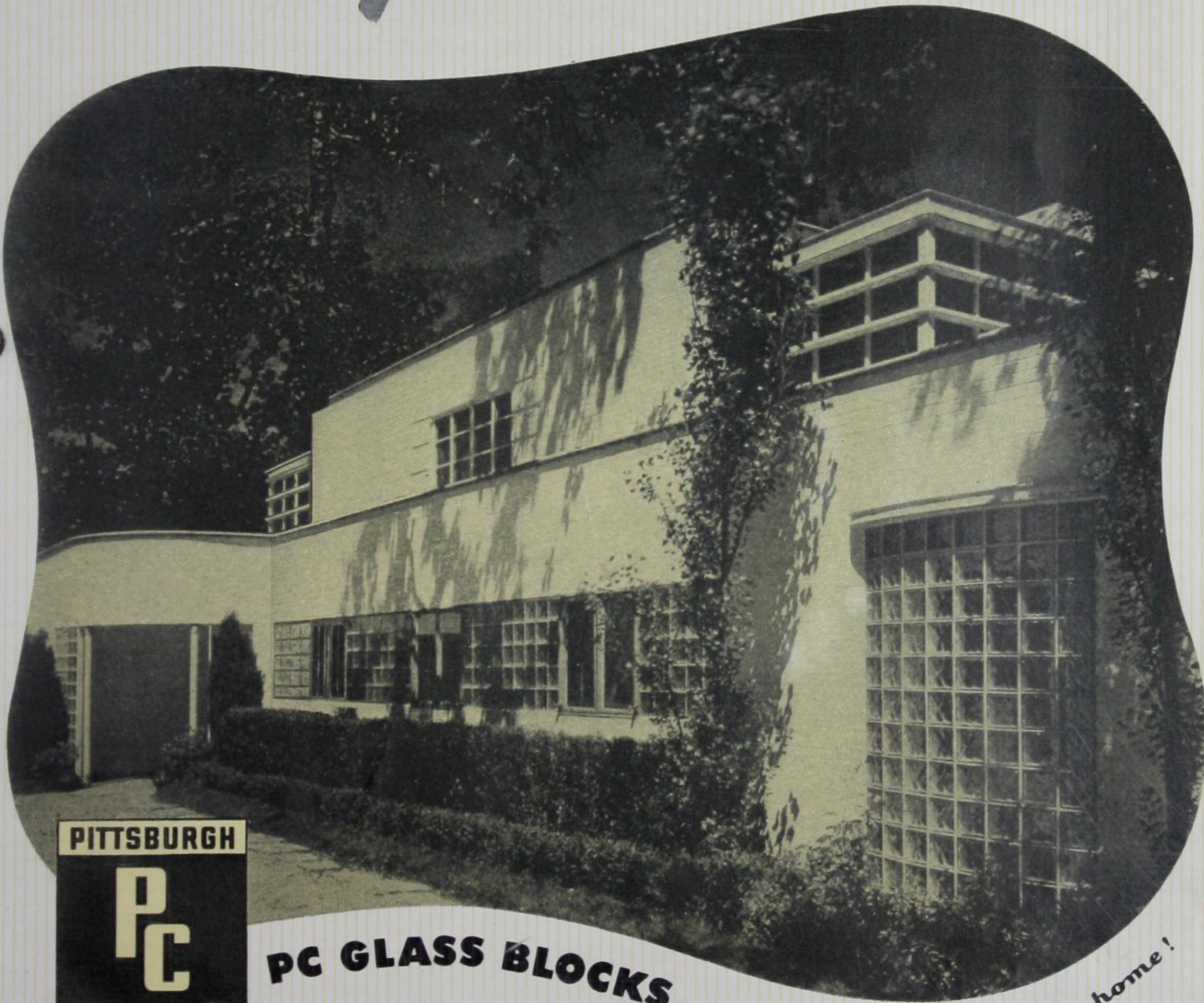
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**IN YOUR HOME WITH**

# *PC Glass Blocks*



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Look to GL

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Lac du Bo  
& Moore,

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William).

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Madill, To

Dryden  
Hamilton.)

ction of glare and heat

# Suntrol Glass Blocks

by PITTSBURGH CORNING CORPORATION

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# Plan for a Charming, Modern Home

WHETHER you are planning to build a new home or to remodel an old one, you are doubtless thinking of a smart, modern house. And you will want one whose handsome outer aspect implies a tasteful, cheery interior, conveniently arranged for gracious living. Your home can be modern without being modernistic. Many a home of conventional design has been made completely charming by the use of modern, many-purpose materials. In the following pages you will find pictures and descriptions of typical installations of the modern building material of countless uses, PC Glass Blocks.

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**PC GLASS BLOCKS**

**THE MARK OF A  
MODERN  
HOME**



# PC Glass Blocks

## THE MARK OF A MODERN HOME

Plenty of bright, cheerful daylight is a prime requisite in a modern home. And with PC Glass Blocks you get floods of diffused light — and more.

Panels of glass blocks are a distinctly decorative feature for every room in the house. In outer openings they have definite insulating properties which aid in heating and air conditioning, prevent chilling drafts, dampen disturbing noises, cut off unpleasant views, insure privacy where it is most desired.

Inside the home, partitions and screens of PC Glass Blocks add a smart, modern touch to the rooms they divide, yet provide plenty of light to show your decorative scheme to the best advantage.

Made of a special kind of glass, PC Glass Blocks are hollow. They are made of two formed pieces of glass, fused together to leave an insulating air space between, with a joint that is as strong as the block itself. PC Glass Blocks eliminate troublesome window sash, need no paint, seldom if ever need repairs or replacements, are easily kept sparkling clean. So you also effect some worth-while economies when you use PC Glass Blocks.

### PANELS OF PC GLASS BLOCKS

around this entrance door insure plenty of clear daylight for foyer or hall. They glow with cheerful welcome to evening guests, harmonize with any style of architecture.

**THE GRACEFUL BAY** and matching panels of PC Glass Blocks are attractive features of this charming house. Inside the room, the fluting of the blocks diffuses the ample supply of light and also forms an interesting design. The insulating properties of PC Glass Blocks prevent excessive heat loss and chilling down draft. They are easily kept sparkling clean, need practically no repairs or replacements.





Loc

**DRESS UP YOUR HOME WITH**

*Daylight*



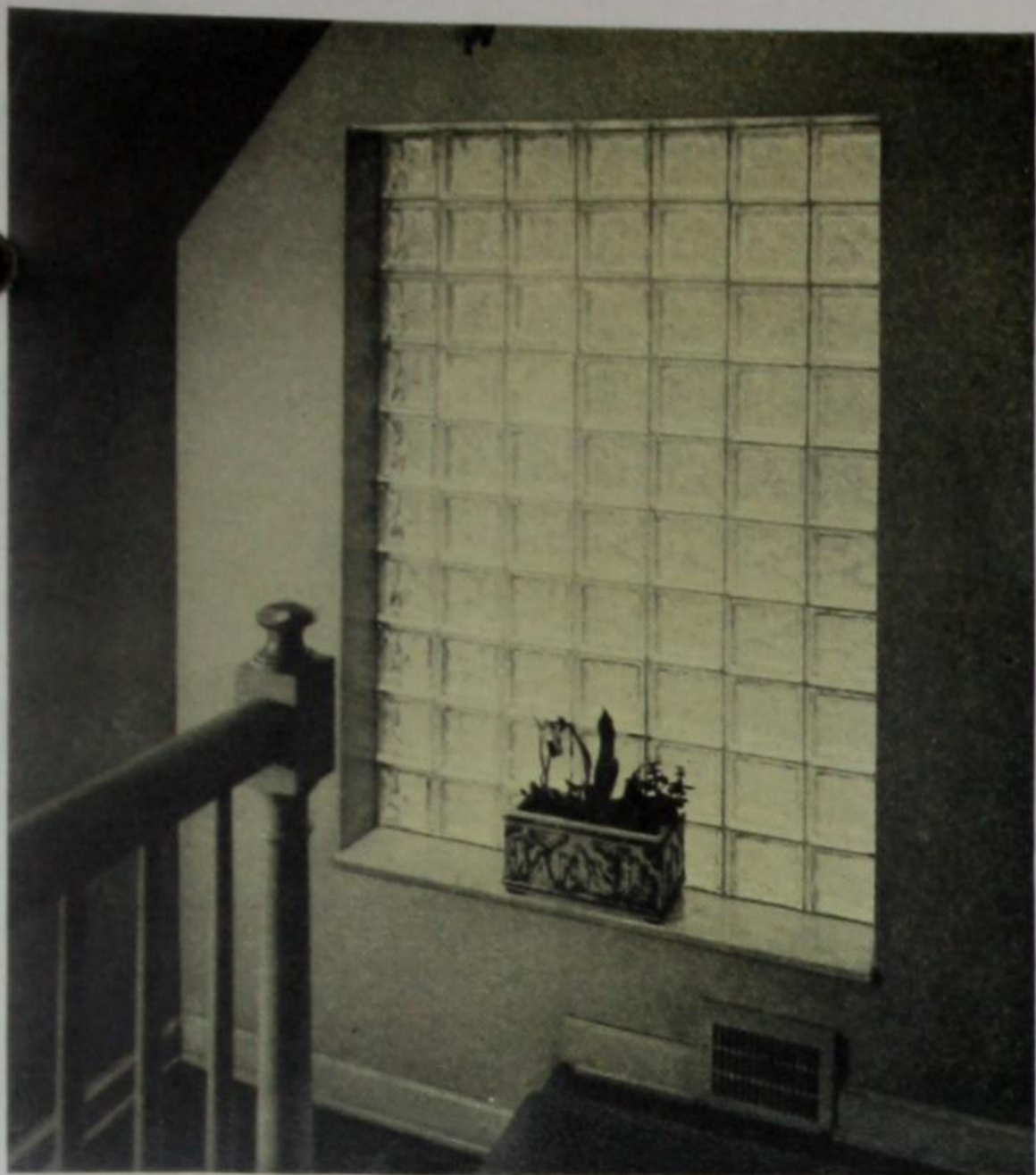
**FRAME YOUR ENTRANCE DOOR** in light, day and night. Flanked by PC Glass Blocks, floods of daylight brighten the entry. Light from indoors shines a cheery welcome to evening guests.

**WHEREVER YOU WANT PRIVACY**, panels of PC Glass Blocks will keep out prying eyes, but still admit plenty of light. They eliminate steamy windows in humid rooms, are easily kept sparkling clean.

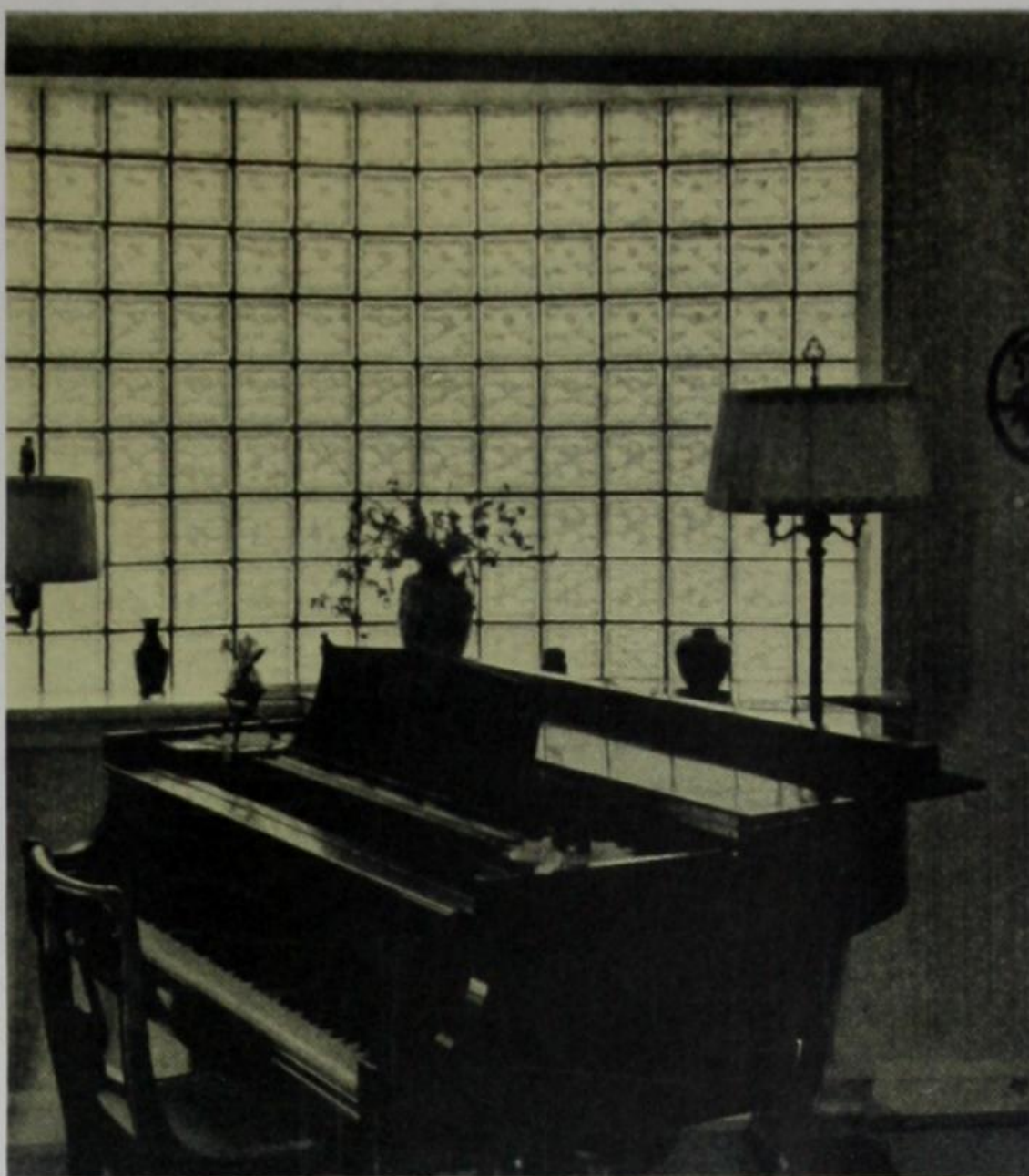


**PC GLASS BLOCKS . . .**





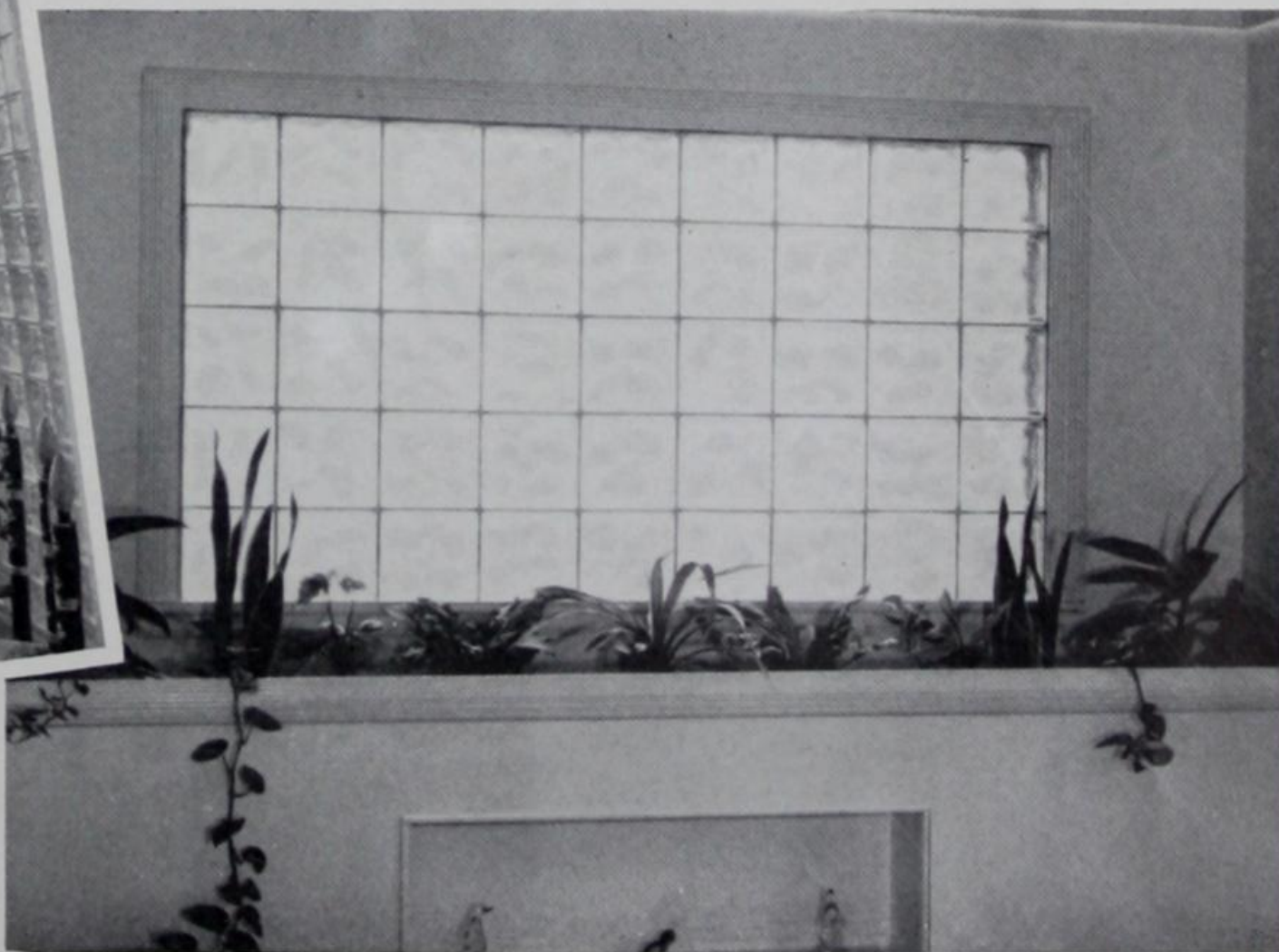
**PLENTY OF LIGHT** on stairs — for safety — can be had from a panel of PC Glass Blocks that improves the outward appearance of your home. Decorative inside too, PC Glass Blocks make your home quieter by deadening outside noises.



**IN THIS ATTRACTIVE** music room the panel of PC Glass Blocks is a lavish source of cheerful light by day and glows with friendly welcome when lights are lit. Even in such large panels, the insulating properties of PC Glass Blocks help maintain comfortable temperatures without excessive cost for heating or air conditioning.



**A LOVELY BAY** like this shows how PC Glass Blocks can be used with clear Plate Glass to preserve privacy yet admit plenty of cheerful daylight. Easy to clean, PC Glass Blocks also save on heating costs.



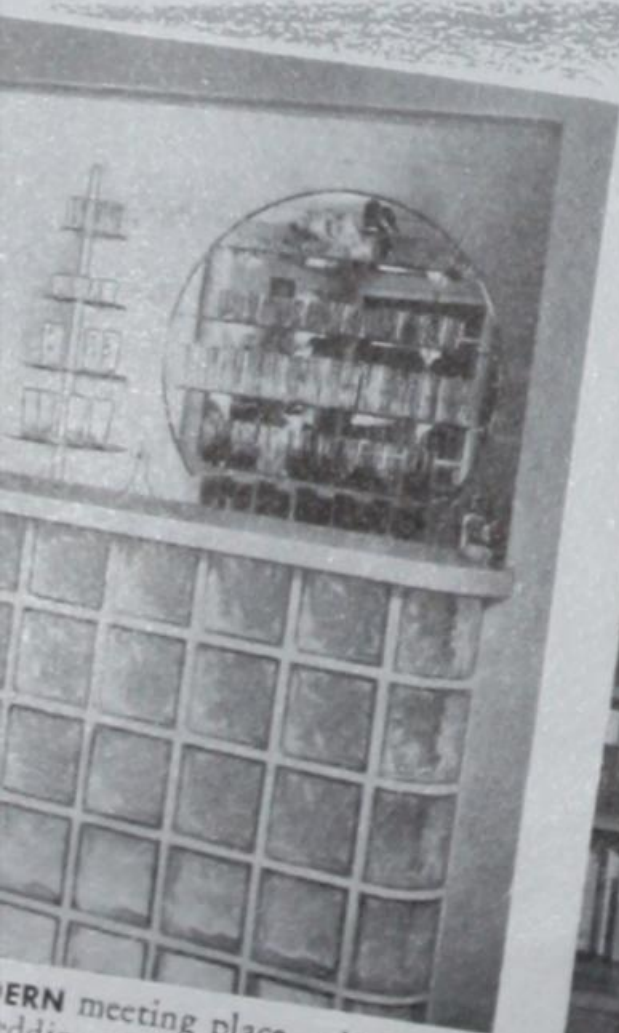
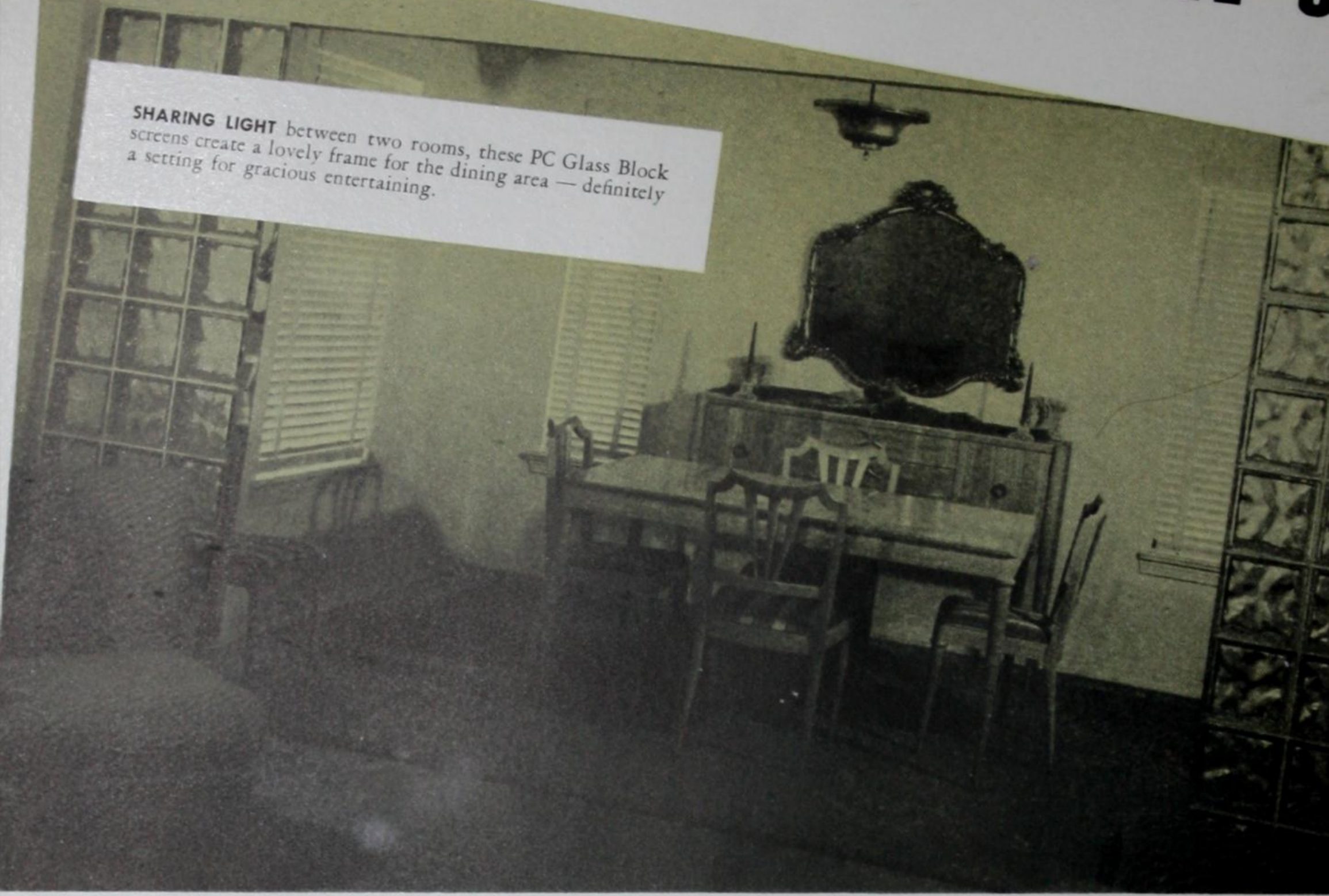
**THIS PANEL SERVES** a double purpose by providing plenty of light for an attractive room and also, because of its insulating value, by helping to maintain comfortable living temperature — as is evidenced by the "indoor garden."

**the mark of a modern home !**



TO WAKE U

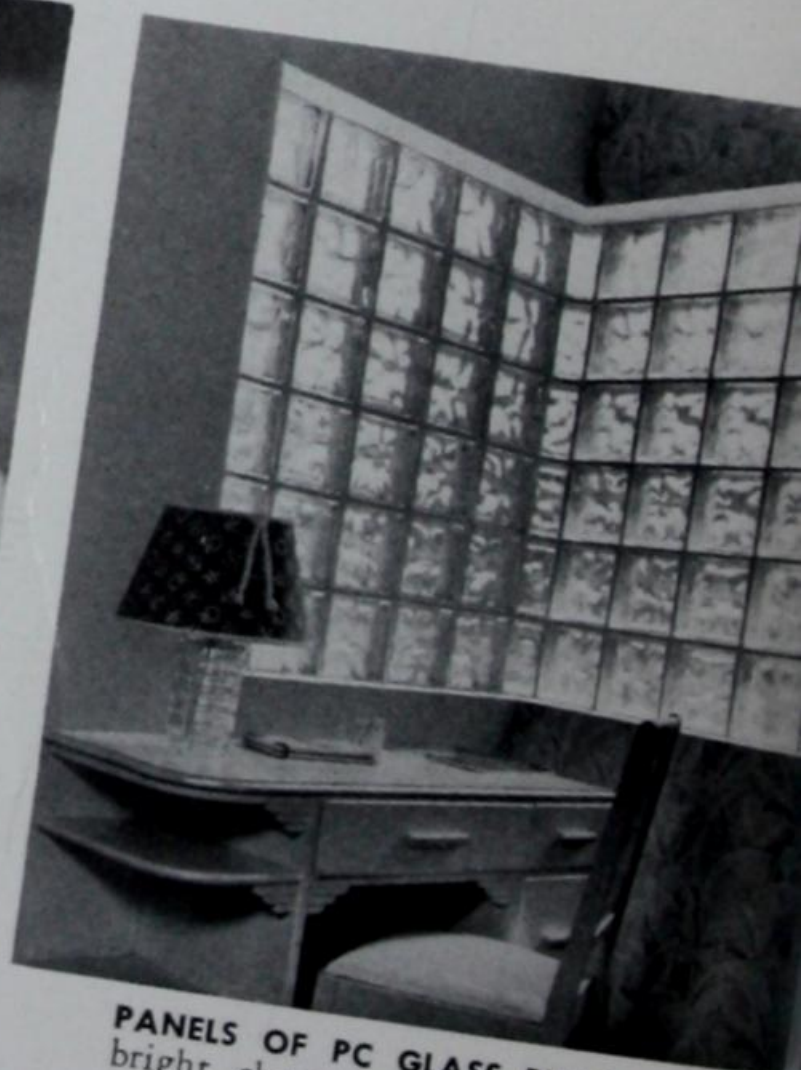
**SHARING LIGHT** between two rooms, these PC Glass Block screens create a lovely frame for the dining area — definitely a setting for gracious entertaining.



**ERN** meeting place, with bedding a convivial glow. Blocks, is a center of clean design and surface glass blocks, make them a feature.



**PLENTY OF LIGHT**, quiet and privacy are assured in the library when you use PC Glass Blocks. Their smart good looks enhance the room's appearance, their insulating properties help maintain comfortable temperature.



**PANELS OF PC GLASS BLOCKS** make bright, charming corner, preventing shadows and drafts. Desk space, sewing room, many "nooks" can be made cheerfully comfortable by the judicious use of incident PC Glass Block panels.

**PC GLASS BLOCKS .**

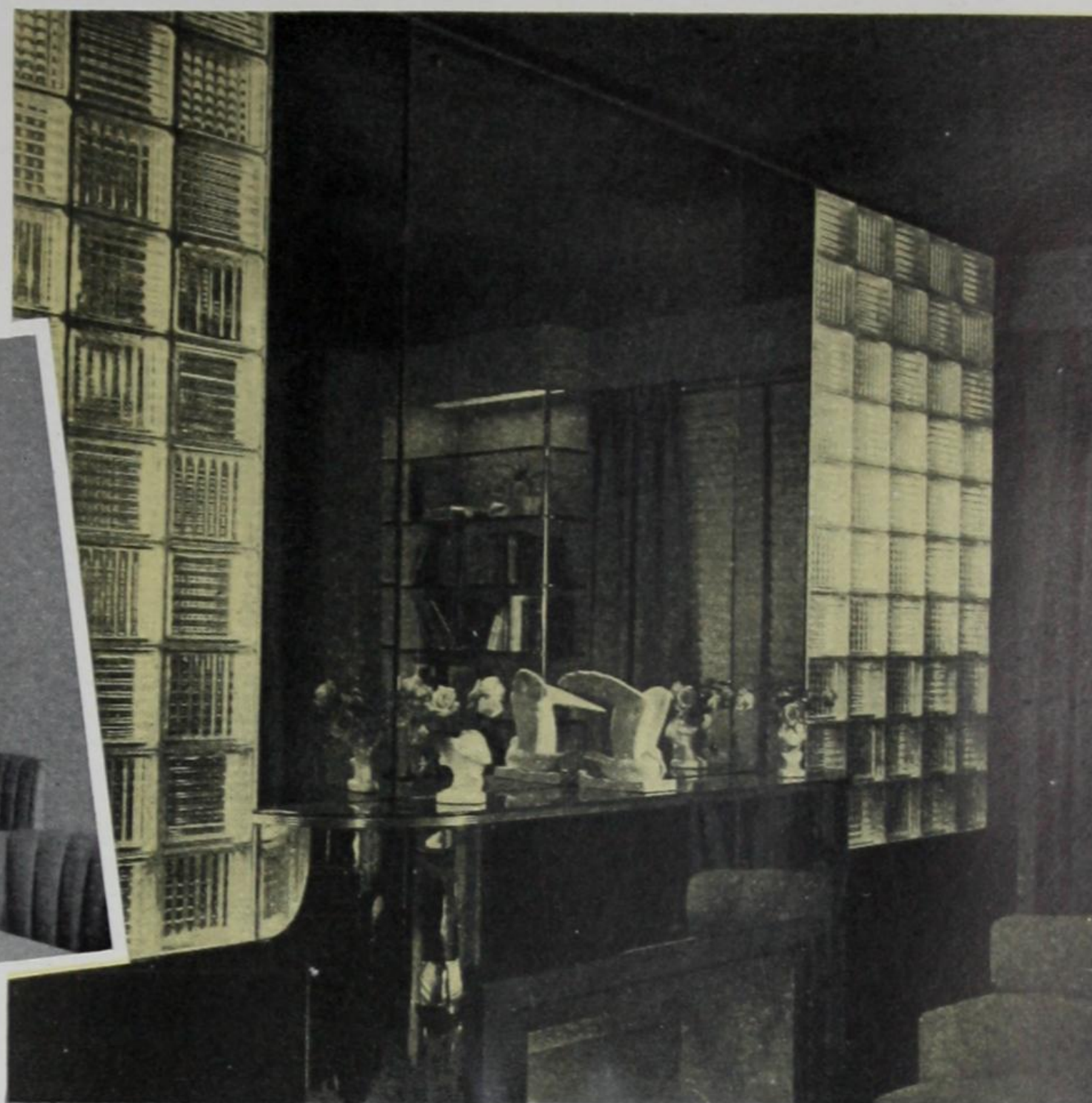


# ROOMS WITH *PC Glass Blocks*

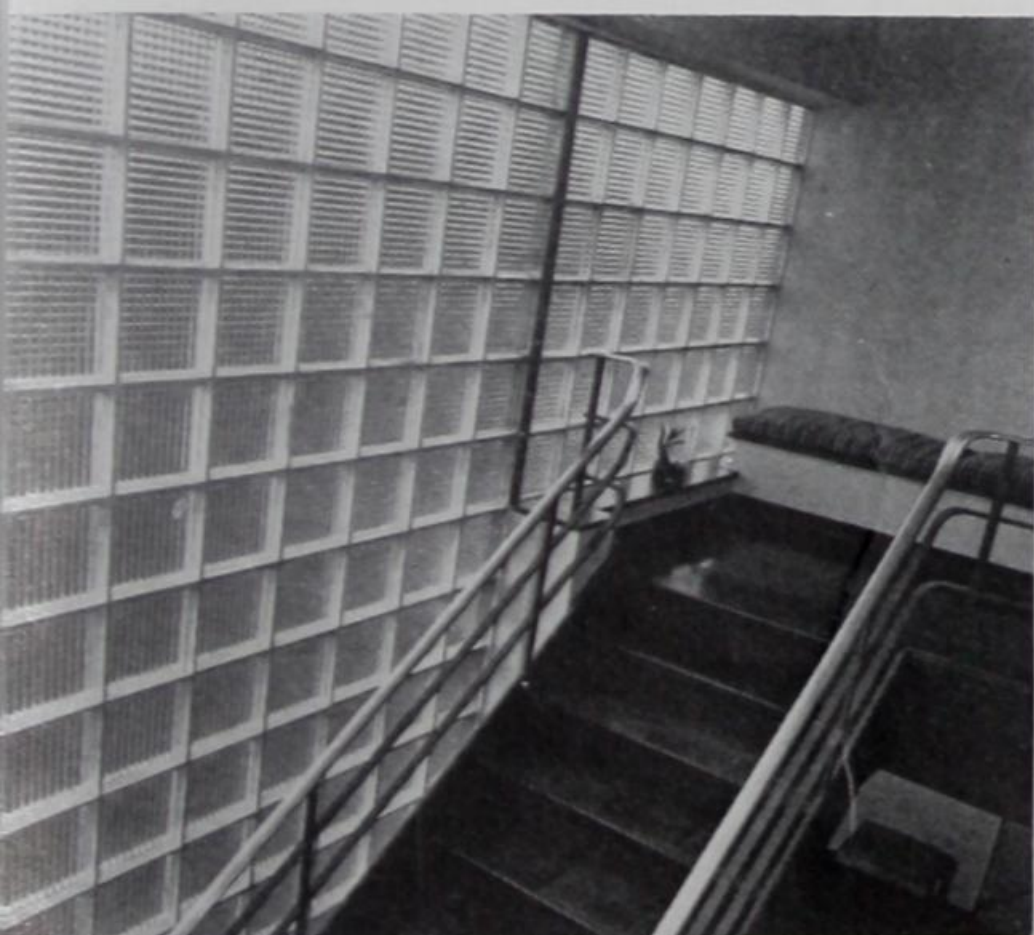
If you are building a new home, consider the many ways PC Glass Blocks can make your home brighter, more beautiful, more livable. If you are remodeling, PC Glass Blocks provide an ideal means of bringing your home up-to-date, making it attractively modern. Glass Blocks are easy to install, in walls and partitions.



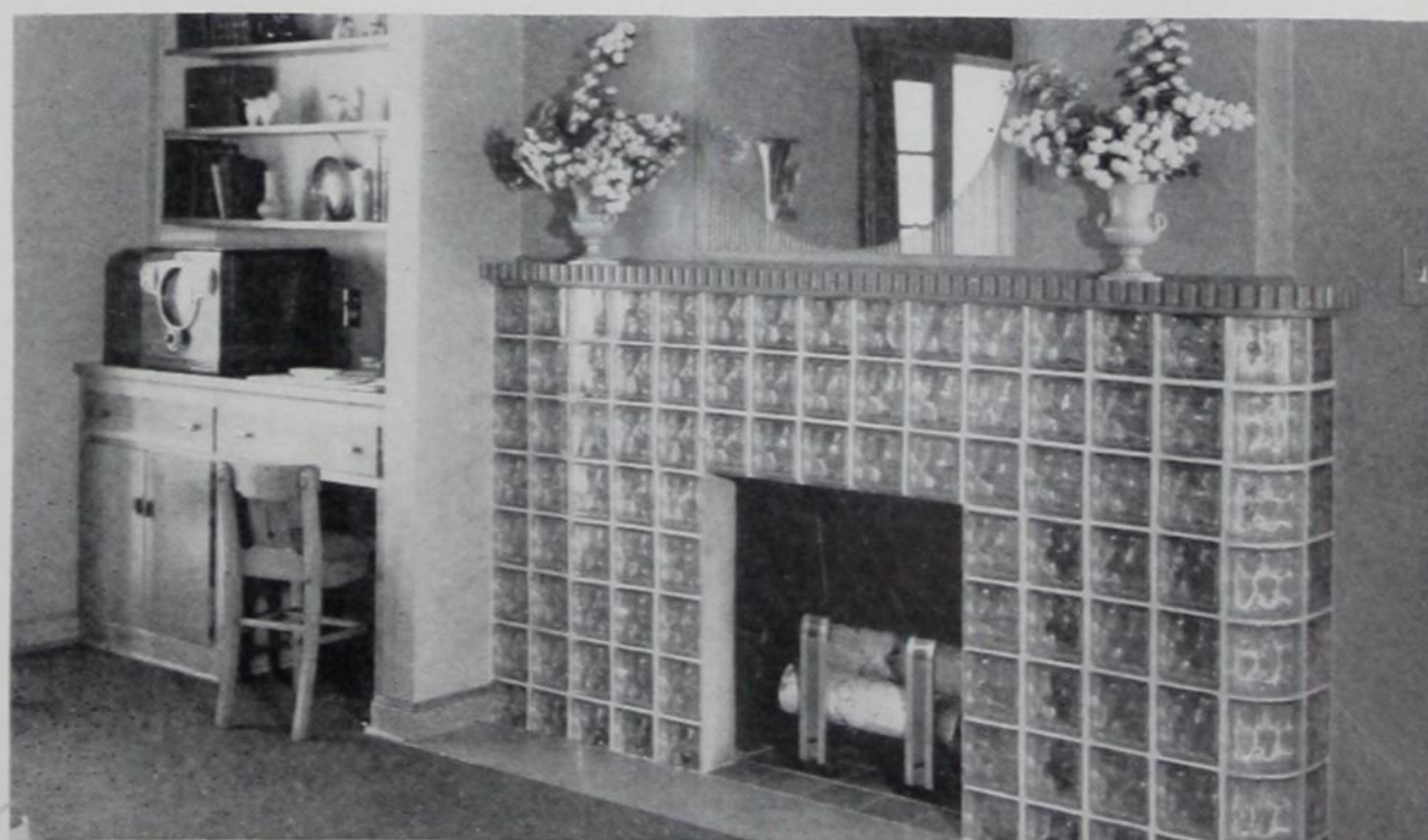
**MAKE AN INTERESTING FEATURE** of built-in incidentals. Often a relatively few PC Glass Blocks will lend a new note of attractive modernity to an entire room.



**THESE DECORATIVE PANELS** of PC Glass Blocks harmonize with the suave, modern living room fittings and furnishings, bringing out their full color and beauty in diffused daylight. Their insulating properties prevent heat losses.



**FLOODS OF CLEAR DAYLIGHT**, through the large panel of PC Glass Blocks, add new attractiveness to this charming modern stairwell. Safety is assured, heat losses are prevented, desirable views are shut off, privacy is maintained by this ideal use.



**A TRULY DISTINCTIVE** fireplace of PC Glass Blocks adds sparkle and zest to the entire room. There are many places in the modern home where just a few glass blocks, used interestingly, can add a great deal of cheery brightness.

**the mark of a modern home !**



*Loc*

# LOOK WHAT *PC Glass Blocks* CAN DO TO GIVE YOU A LOVELY HOME



**FOR YOUR OUTDOOR** living room, here's a decorative wall of PC Glass Blocks that is new and unusual. Bright and gay, it gives you a feeling of privacy and is a practical windbreak.

**CUTTING OFF AN UNATTRACTIVE VIEW** in this modern dining room, the panel of PC Glass Blocks also preserves the privacy of the occupants. The big panel admits plenty of light for the spacious room, is easily cleaned and seldom if ever needs repairs or replacements.



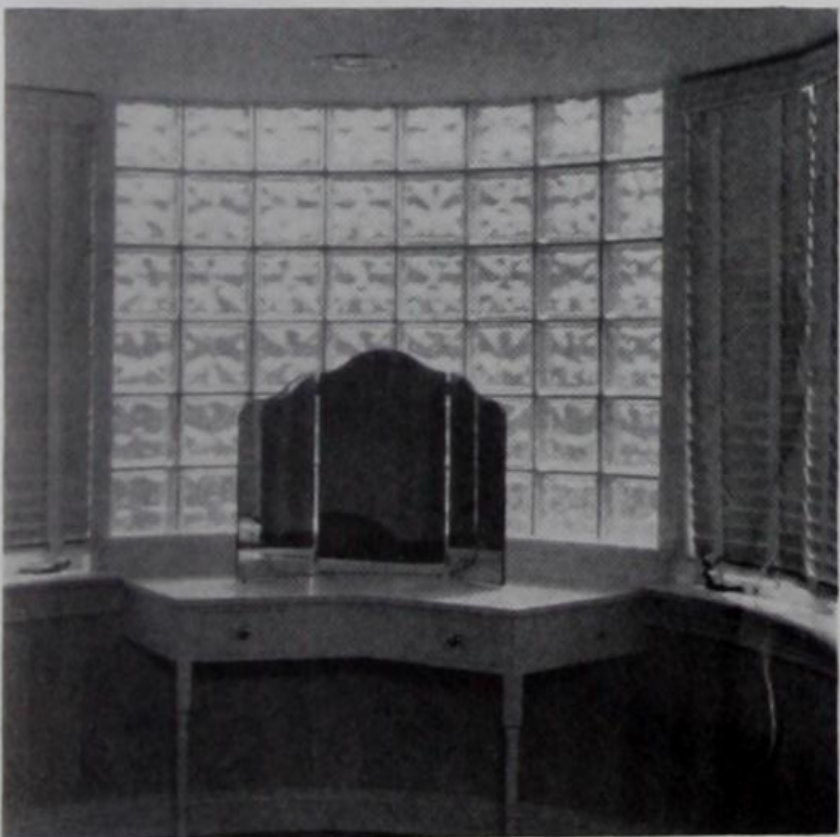




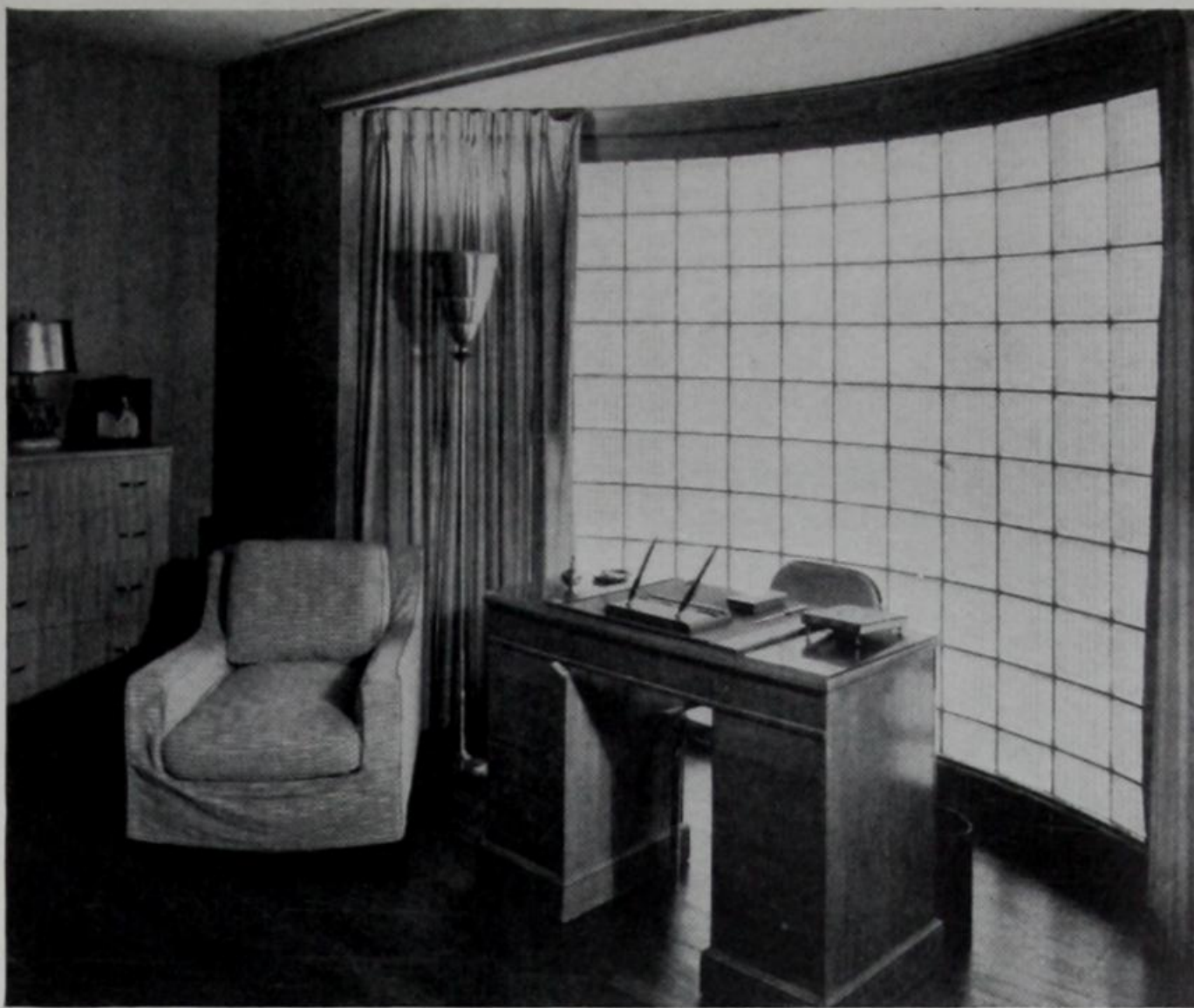
**BRINGING DAYLIGHT INDOORS**, this decorative frame of PC Glass Blocks around the door enhances the charm of the entire room. The insulating properties of PC Glass Blocks are especially appreciated around doorways, since they reduce heat losses, cut down chilling drafts.



**FOR BEAUTY AND SAFETY** at stairheads, a decorative panel of PC Glass Blocks admits plenty of clear daylight.

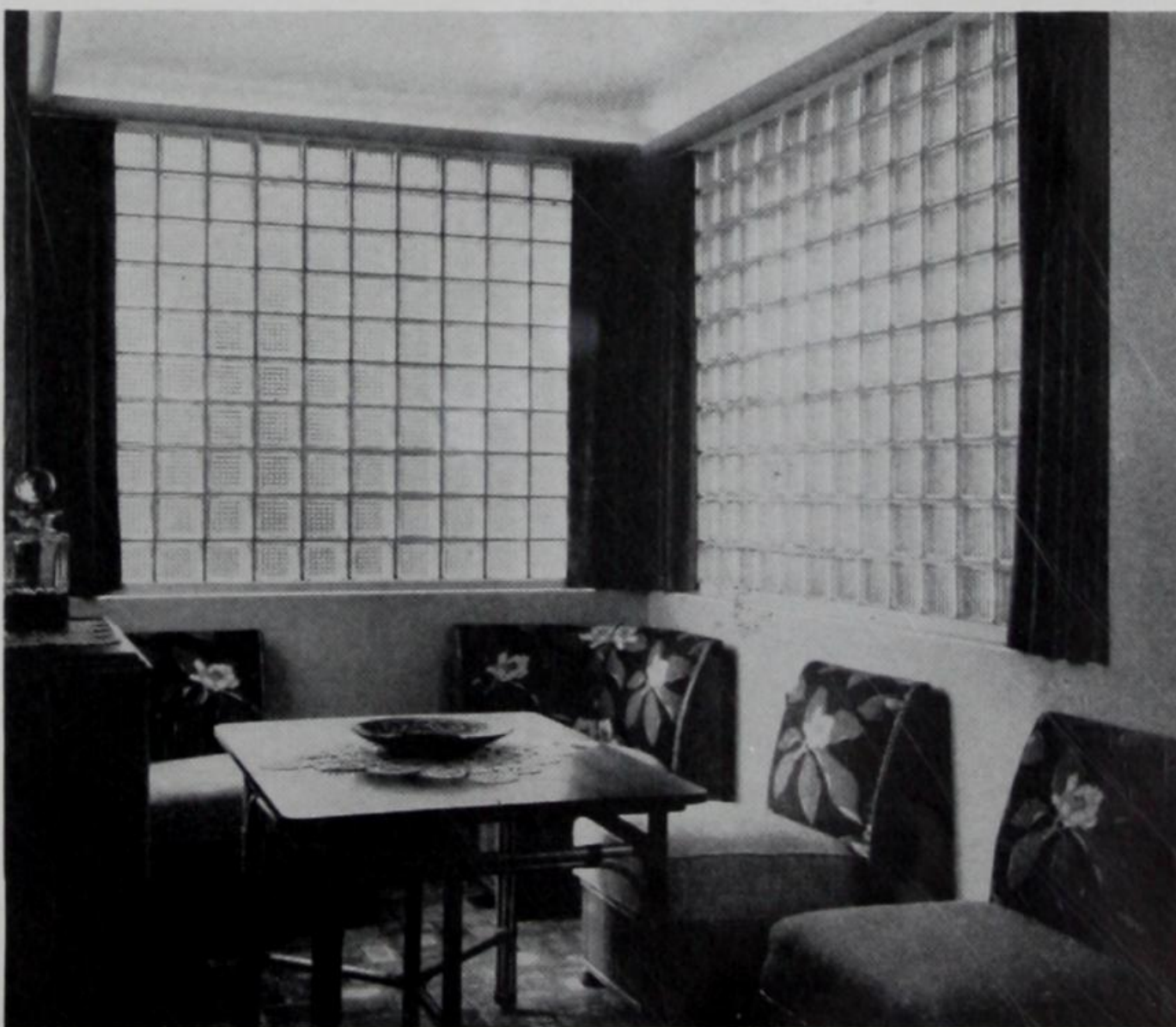


**LIGHT, OF COURSE**, is needed for coiffure and make-up. It comes plentifully from this panel of PC Glass Blocks.



**PLENTY OF LIGHT** for recreational or studious pursuits is provided by the large bay of PC Glass Blocks. Being translucent but not transparent, PC Glass Blocks insure privacy, can be used to shut off an unattractive view.

**HARMONIZING** with the design of this modern dining room, the panels of PC Glass Blocks provide ample lighting to accent the decorative elements. Privacy is also assured, with easy cleaning and a minimum of maintenance.



**the mark of a modern home !**

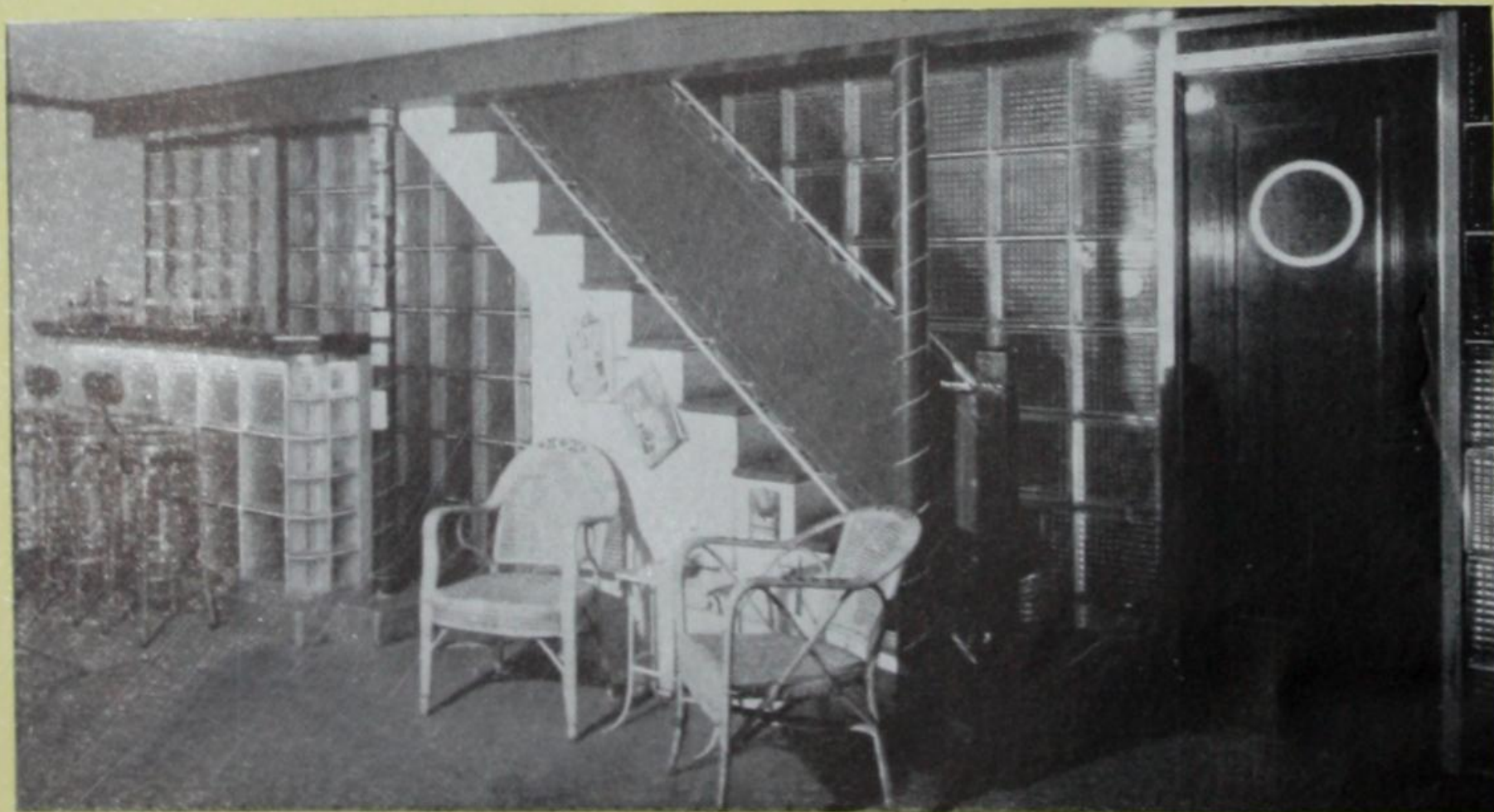




**TWIN PANELS OF PC GLASS BLOCKS,** flanking the fireplace, admit plenty of daylight into this homelike living room. PC Glass Blocks can also dampen outside noises, cut off unattractive views.



**CHEERFUL, DIFFUSED DAYLIGHT,** supplied by PC Glass Blocks, makes this modern kitchen a cheerful place to work. The light can be concentrated on working surfaces and also distributed throughout the room.



**THIS DISTINCTIVE GAME ROOM** has been created with PC Glass Blocks. Concealed colored lights shed a festive glow. Partition walls of PC Glass Blocks can change wasted basement areas into attractive recreational rooms.

**PC GLASS BLOCKS .**



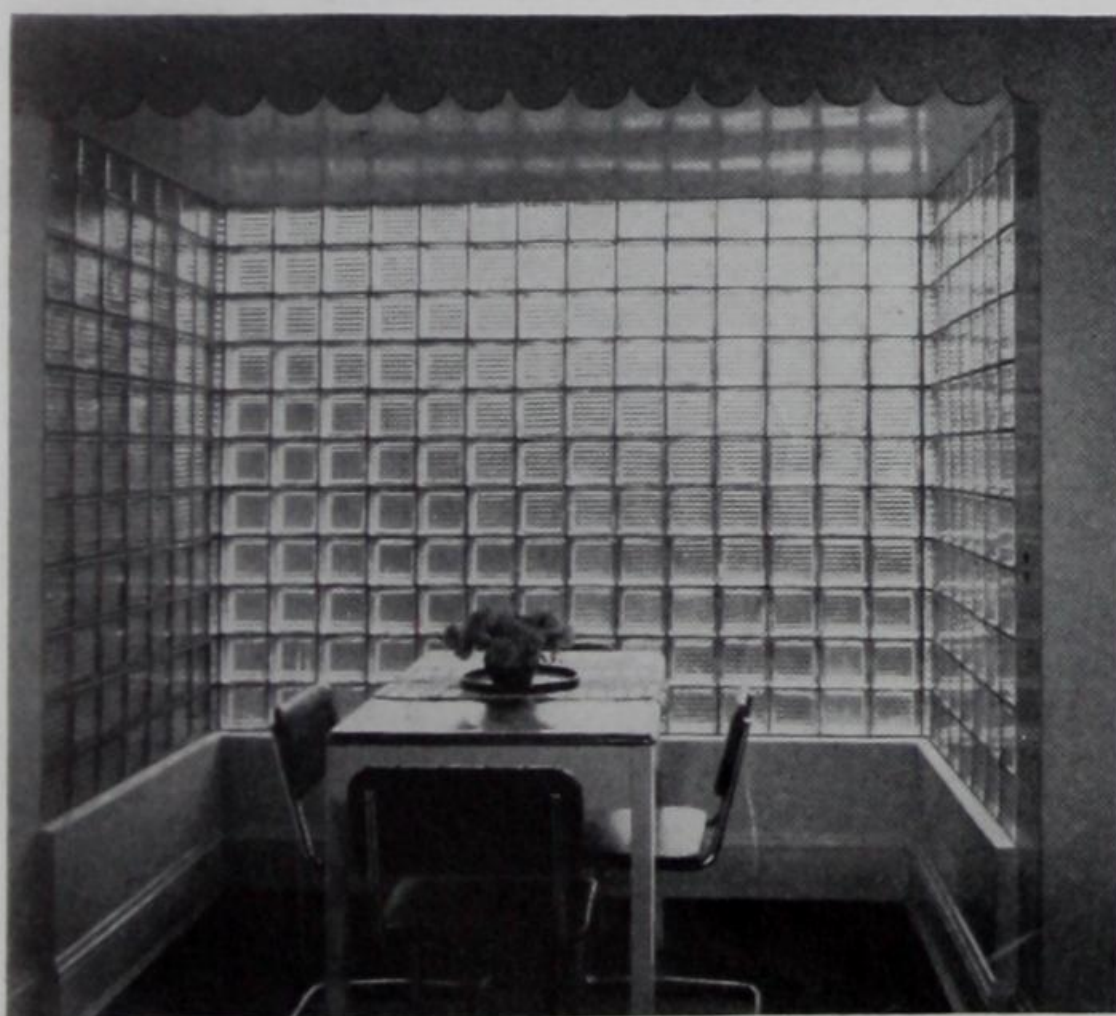


**PLENTY OF CLEAR DAYLIGHT**, on work surfaces right where it is needed, is supplied by this long panel of PC Glass Blocks. Insulating too, they do not steam-up, are easily kept spotlessly clean.

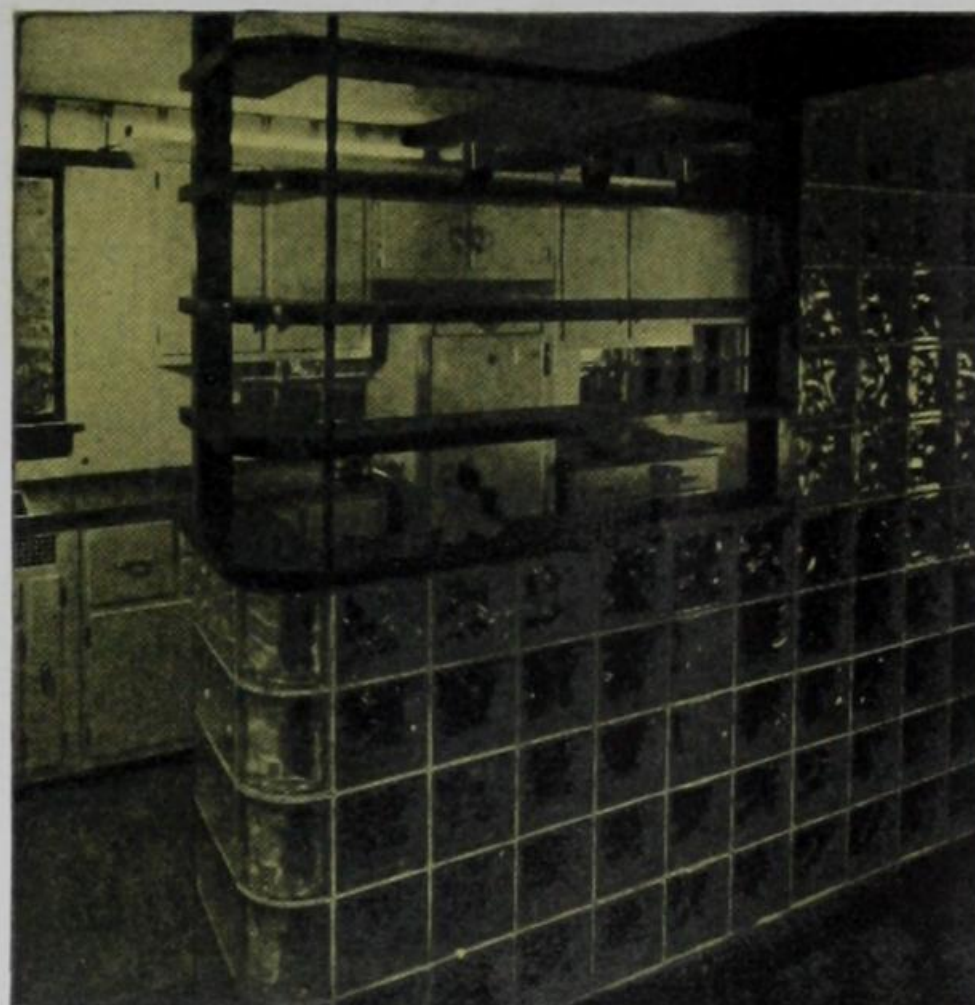
## MAKING PLEASANT PLACES IN YOUR HOME WITH

# *PC Glass Blocks*

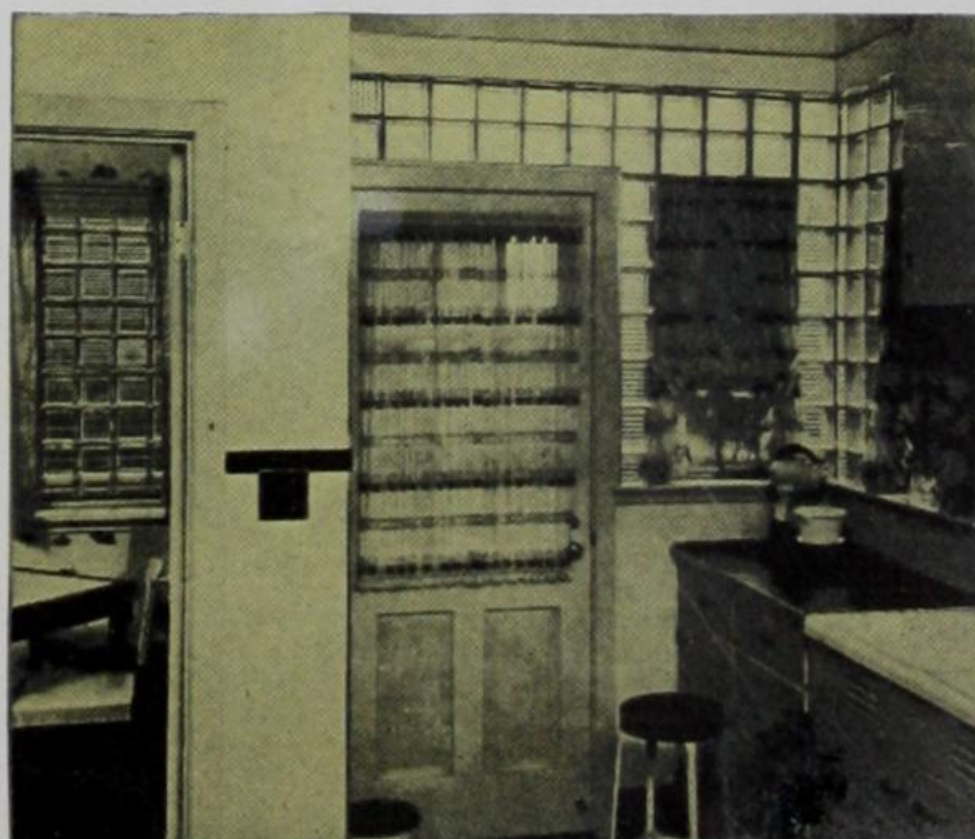
In the workaday places in the home, the modern housewife demands plenty of clear diffused daylight. That is why you find panels of PC Glass Blocks in so many modern kitchens and pantries. Aside from brightening the appearance of the entire room, PC Glass Blocks are easy to clean, keep out heat and cold. Beautiful, they also are useful.



**IN THE TRULY MODERN MANNER**, this breakfast nook of PC Glass Blocks packs a maximum of convenience and brightness into a minimum of space. The PC Glass Block panels assure privacy, exclude dust and grit, are so easy to keep clean.



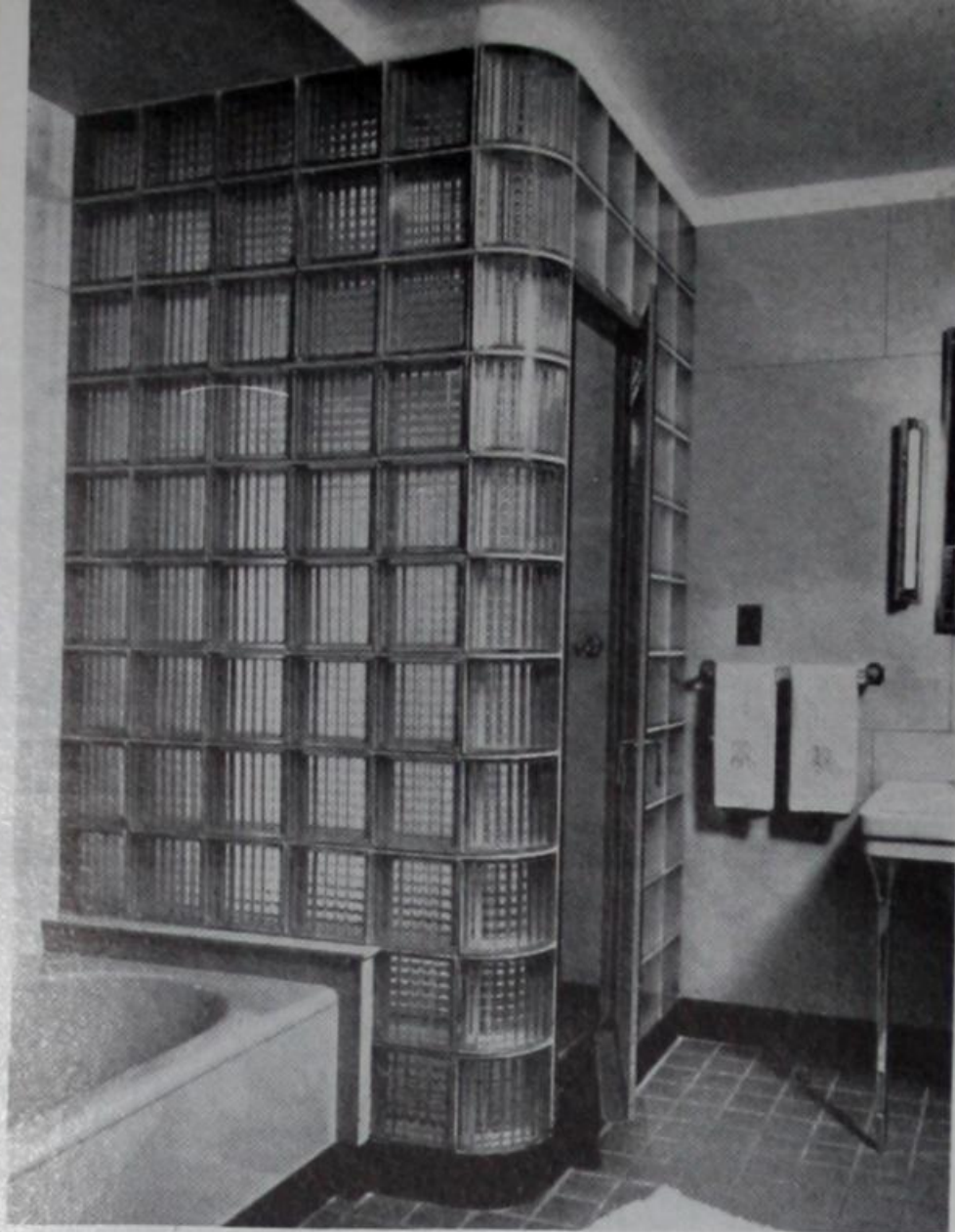
**SCREENS OR PARTITIONS** of PC Glass Blocks establish a definite separation between rooms, yet "share the light" so there are no dark corners. Use panels like this for dinettes, pantries, bathrooms and countless other places in your home.



**A PLEASANT WAY** to start the day — for cook and for guest — is to cook and eat breakfast in this bright, airy kitchen and dinette. The panels of PC Glass Blocks admit plenty of light, are easily cleaned, reduce heat losses and preserve privacy.

**the mark of a modern home !**





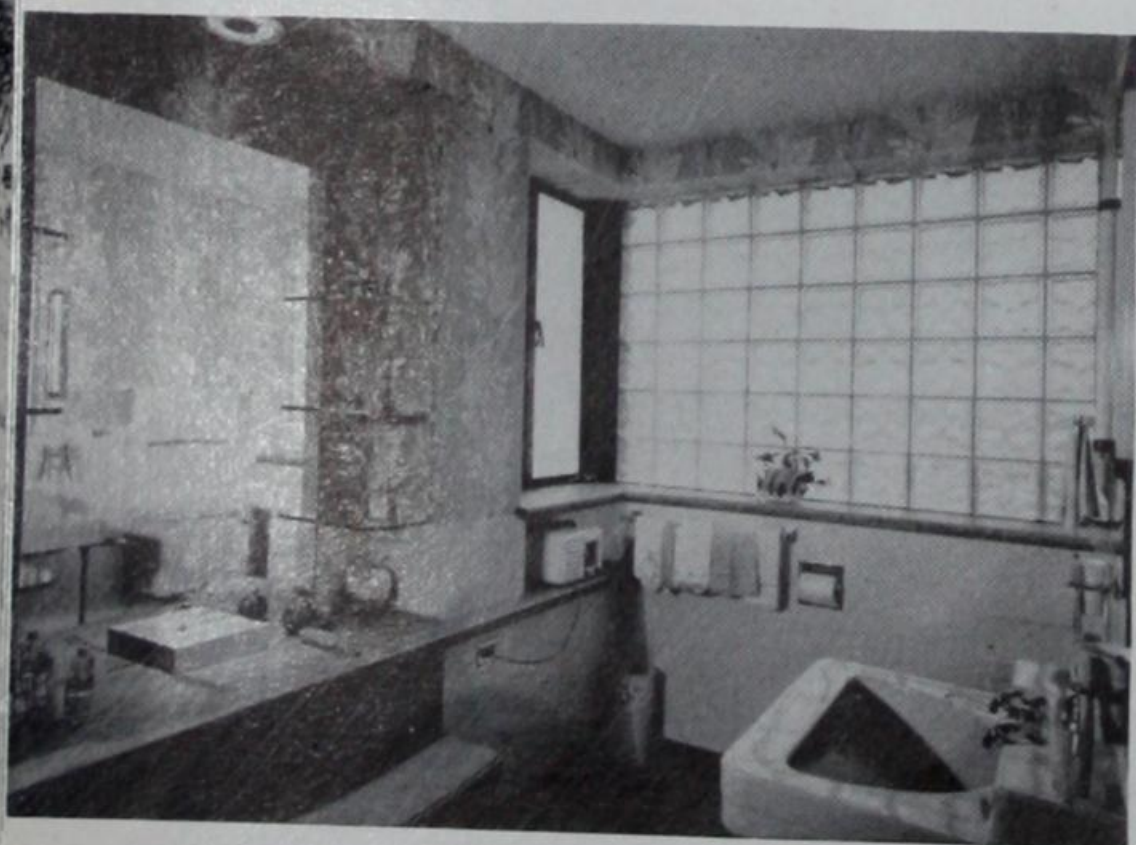
**SMART AND CONVENIENT** is the shower stall of PC Glass Blocks. Plenty of light gets in, no water can spatter out. Cleaning is quick and easy with PC Glass Blocks.

## PLENTY OF LIGHT WITH BEAUTY AND PRIVACY

The versatility of PC Glass Blocks is of distinct value in the modern bathroom. Water, steam, humidity cannot harm them. Insulating qualities help maintain comfortable temperatures. Especially designed patterns are available to obscure vision and assure complete privacy. Think of your bath in terms of glass and note some of the many ways you can use PC Glass Blocks.



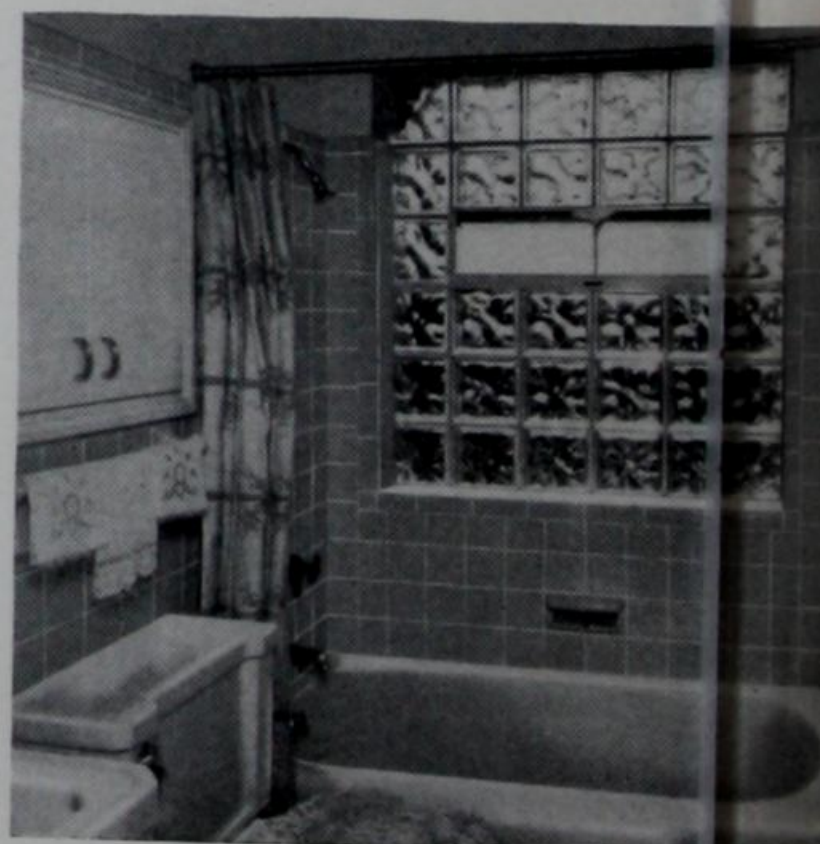
**BEAUTY AND UTILITY** are personified in this colorful modern bathroom. Ample daylight floods the room, yet the panels of PC Glass Blocks preserve absolute privacy. There are no chilling drafts, no long laborious cleaning jobs where you use PC Glass Blocks.



**MODERNLY BRIGHT** and light, this bathroom also benefits by the other qualities of PC Glass Blocks. Absolute privacy, minimum heat losses, freedom from drafts — without laborious cleaning jobs — are yours when you use PC Glass Blocks.



**THIS SCREEN** lends light to the bather from the rest of the room. Just another way in which the modern home is made more efficient, more comfortable, by making all possible use of PC Glass Blocks.



**VENTILATION**, light and privacy — all made possible by one panel of PC Glass Blocks. This is typical of the use of other materials in the modern home in combination with PC Glass Blocks.



**FACTS YOU WILL WANT TO KNOW ABOUT**

# PC Glass Blocks

1. PC Glass Blocks are made of clear, colorless glass of proven durability. The light which streams through them is of full daylight tone, requiring no special consideration in the matching of colors for decoration.
2. PC Glass Blocks are hollow "all glass" units with fused seals made at high temperatures, relatively free of entrapped water vapor. This feature was developed by our engineers so that PC Glass Blocks will remain tightly sealed. The joint is as strong as any other part of the block. This tight seal insures a dry, dead-air space within the block which is so important to efficient heat insulation.
3. PC Glass Blocks have a special grit-bearing, moisture- and alkaline-resisting, plastic coating on all mortar edges. This insures a complete and permanent bond between the glass and the cement mortar and provides a panel construction having a high degree of wind resistance and water-tightness.
4. PC Glass Block edge construction forms a "key-lock" mortar joint, providing for a full bed of mortar, yet permitting a visible joint of only about  $\frac{1}{4}$  inch, resulting in a trim panel that is pleasing to the eye.
5. PC Glass Blocks' high insulating value prevents the forming of condensation on the room side of glass block panels until the outside air has reached a temperature much lower than that necessary to produce condensation on single-glazed windows. The problem of wet and dripping window sills rarely occurs where PC Glass Blocks are used.
6. PC Glass Block panels have sound reduction factors of 37.6 to 42.0 decibels, a value closely approximating that for a 4-inch hollow clay tile wall plastered both sides. They minimize outside distracting noises and protect privacy within the home.
7. PC Glass Block panels have a minimum compressive strength of 400 to 600 pounds per square inch. This crushing strength is well above that of many accepted masonry constructions. However, glass block construction should never be used for loadbearing walls or panels. Adequate provision for expansion must be made at head and jambs of all exterior panels and at head only of interior panels.

## THERMAL INSULATION

Tests run during the past several years by a number of nationally recognized laboratories have established values for the over-all coefficient of heat transfer "U" as 0.40 to 0.43 for panels of 8-inch block constructed in the recommended manner. In computing heat losses through panels for design purposes, it is recommended that a "U" value of 0.49 be used for all block sizes and face patterns.

## SOLAR HEAT GAIN

The use of glass blocks for light-transmitting areas results in a marked reduction in the total solar heat gain as compared with ordinary windows. This factor is of considerable advantage in buildings that are properly air-conditioned, but does not eliminate the need for adequate ventilation or shading in non-air-conditioned rooms.

Based upon extensive tests, suggested figures for design computations are a maximum hourly rate of 41 B.T.U. and maximum daily rate of 250 B.T.U. total heat gain per square foot of glass block panel on South exposure, 40 degrees North Latitude for August 1.

More complete data on solar radiation appear in the current Guide of the American Society of Heating and Ventilating Engineers.

## LIGHT TRANSMISSION

Light transmission through the faces of individual glass blocks has been measured by two somewhat different methods in the absence of any generally accepted standard. Average transmission values for each PC pattern are:

Vue, 85% — Argus, Argus Parallel Flutes, Decora, Reeded-Decora, Druid and Saxon, 80% — Bristol, 70% — Prism Light-Directing 65% — Essex, 50%.

## ESTIMATING DATA

(For 100 sq. ft. of panel laid with  $\frac{1}{4}$ -in. visible mortar joints)

Size of Block . . .	6"	8"	12"
Number of Blocks	400	225	100
Weight of Panel	2000 lbs.	1800 lbs.	1900 lbs.
Volume of Mortar	4.3 cu. ft.	3.2 cu. ft.	2.2 cu. ft.

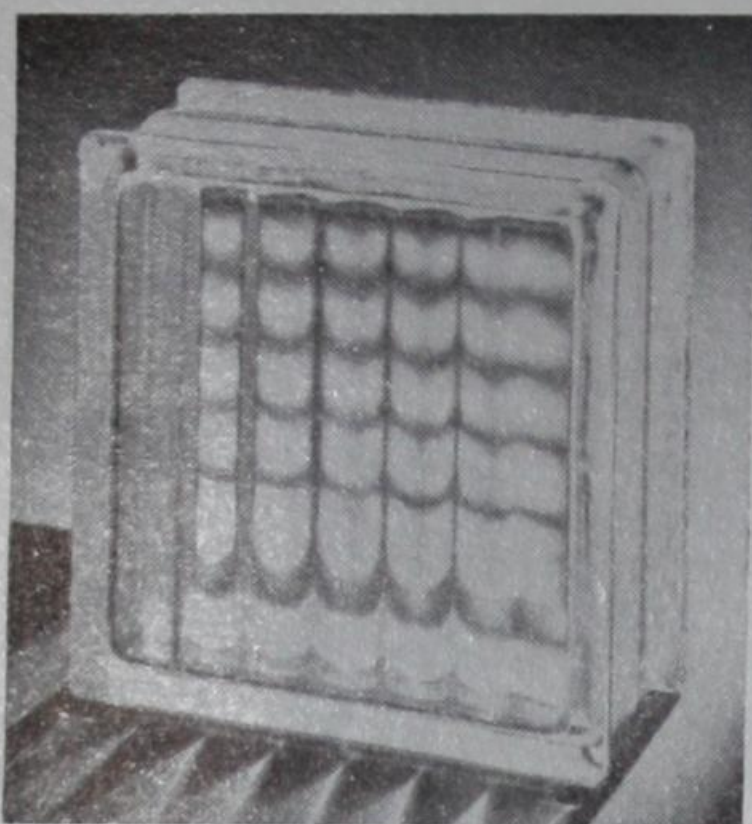
(For 1 cu. ft. of Mortar, based on 1-1-4 Mix by Volume)

Cement . . . . .	$\frac{1}{4}$ bag
Lime . . . . .	$\frac{1}{4}$ bag
Sand . . . . .	1 cu. ft.
Waterproofing Compound, Pittsburgh NV-3389 . . . . .	$\frac{1}{2}$ pint

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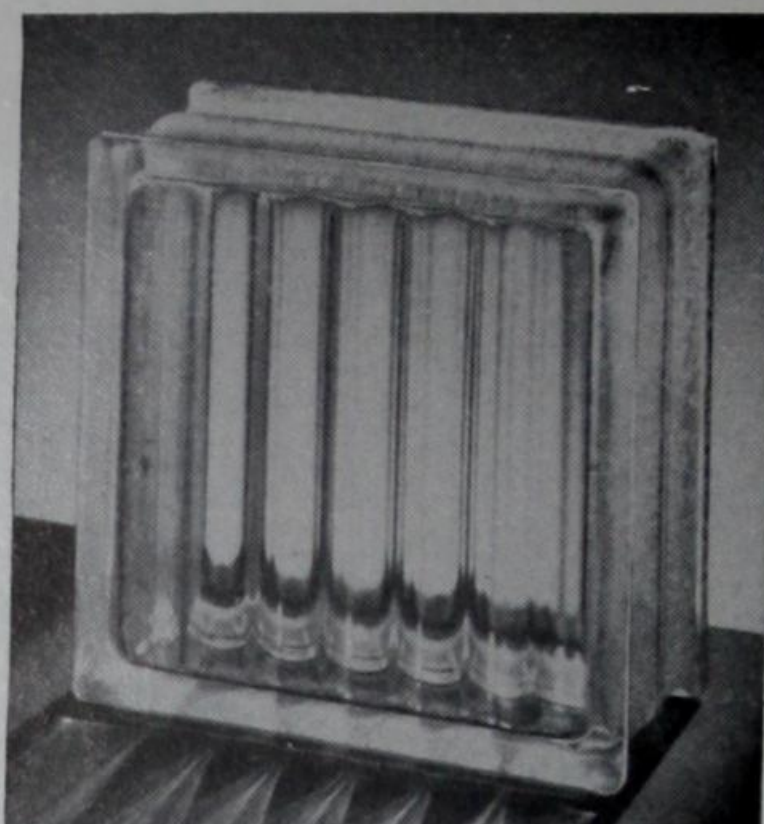


# CHOOSE FROM THESE ATTRACTIVE PATTERNS



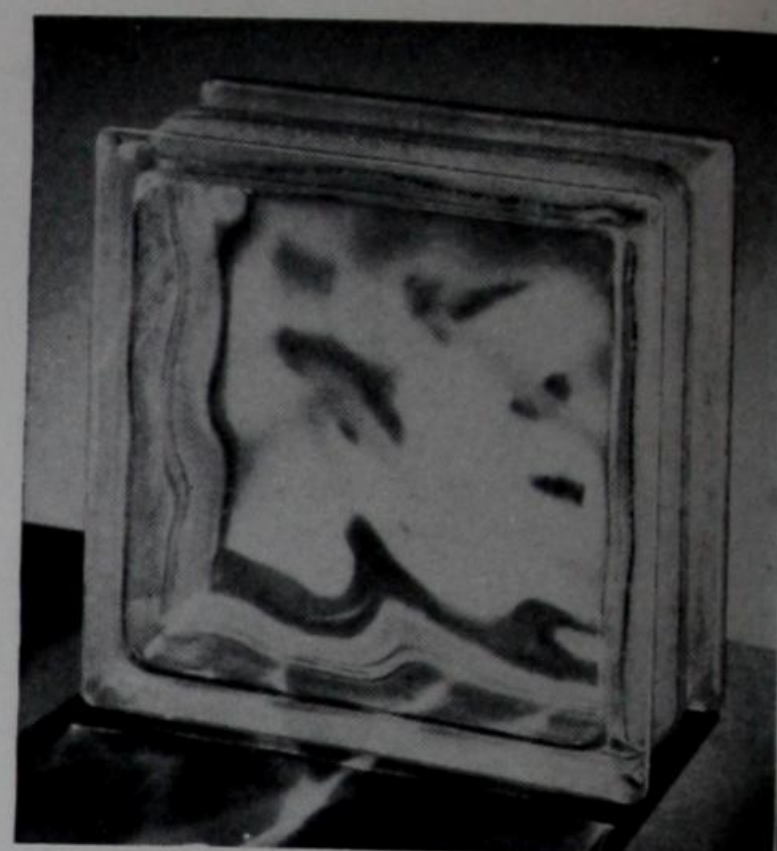
**ARGUS**

1. A conventional pattern designed for general use, both decorative and utilitarian.
2. High light transmission, good light diffusion.
3. Can be laid with flutes vertical or horizontal on room side with equally pleasing and efficient results. Caution: When used in combination with corner or radial blocks, if pattern match is desired, the standard blocks must be laid with flutes horizontal on room side.
4. Smooth outside faces permit maximum cleanability.
5. Pattern description: Smooth outside faces, interior flutes identical, assembled at right angles.



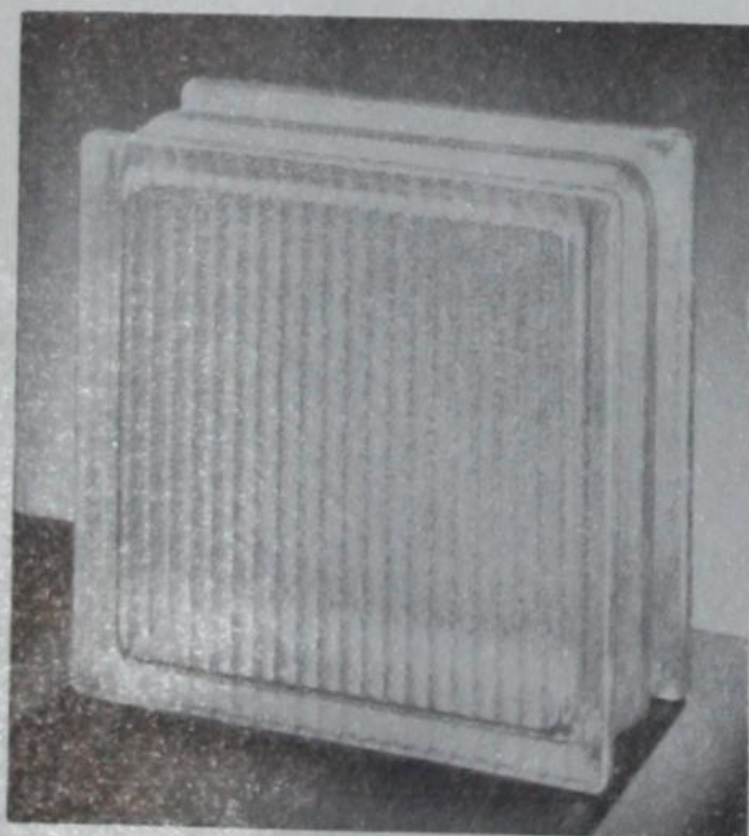
**ARGUS PARALLEL FLUTES**

1. A conventional pattern designed for general use, both decorative and utilitarian.
2. High light transmission, good light diffusion.
3. Can be laid with flutes vertical or horizontal with equally pleasing and efficient results. Caution: When used in combination with corner or radial blocks, pattern match can be obtained on only one side of panel.
4. Smooth outside faces permit maximum cleanability.
5. Pattern description: Smooth outside faces, interior flutes identical and parallel.



**DECORA**

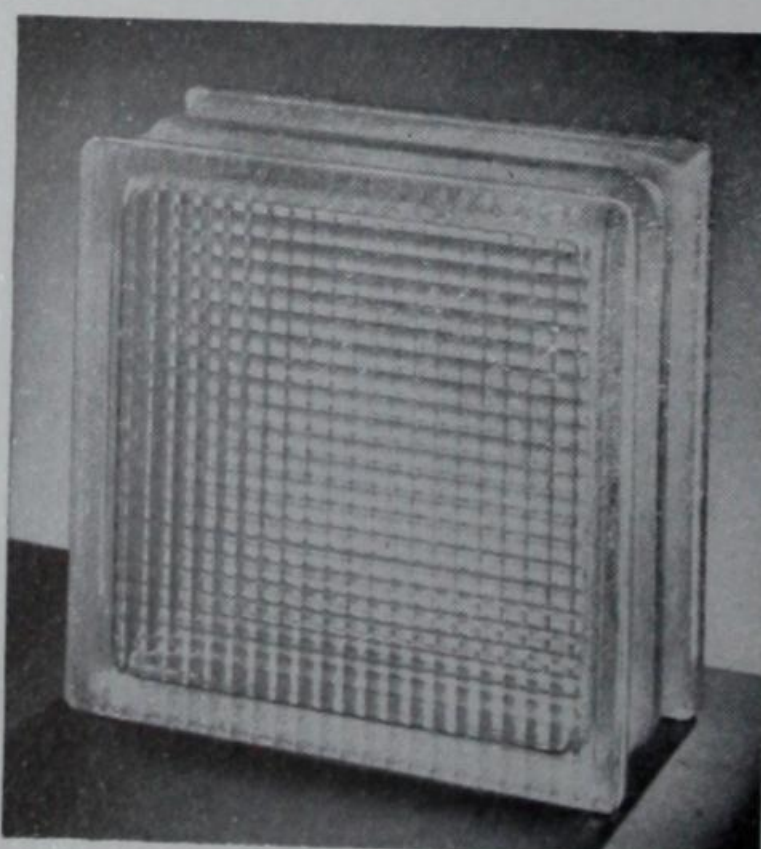
1. A decorative pattern ideally suited to harmonize with both modern and conventional design.
2. High light transmission with irregular diffusion and high translucency.
3. Asymmetric design permits laying without regard to pattern.
4. Smooth outside faces insure maximum cleanability.
5. Pattern description: Smooth outside faces, asymmetric design on both interior faces.



**BRISTOL**

1. Designed to provide softer, more diffused light.
2. Should be laid with exterior flutes vertical.
3. Cleanability maintained by the smooth exterior flutes and lightly etched border.
4. Pattern description: Narrow vertical flutes and lightly etched border on both outside faces, and flat etched inside faces.

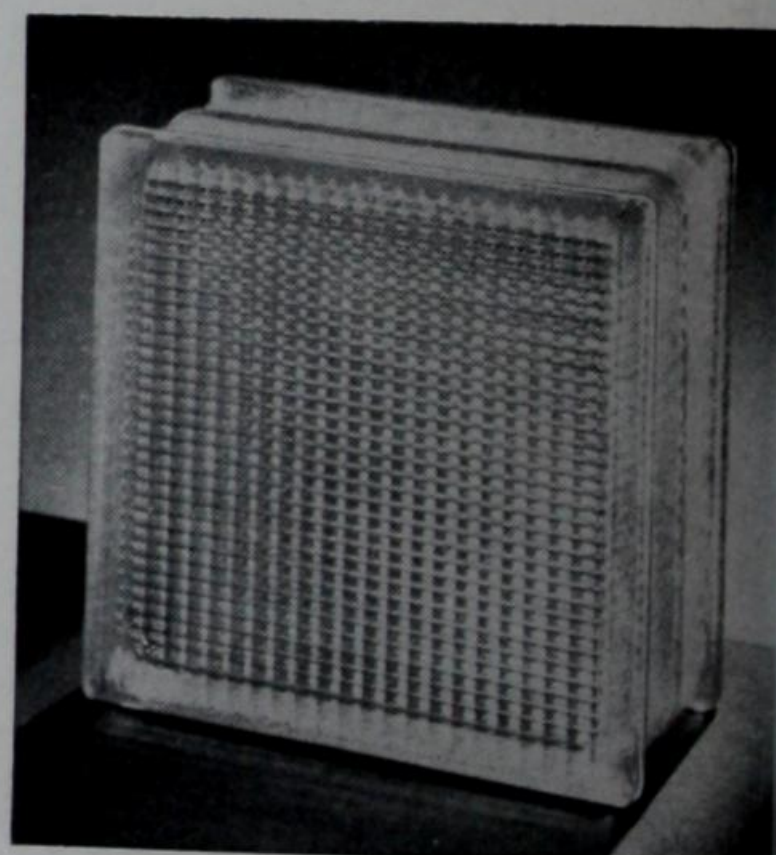
NOTE: This block is supplied in the 7 3/4" sizes only.



**DRUID**

1. Designed to provide high light transmission and closely match the Prism Light-Directing unit. For use on elevations without sun exposure when Prism Light-Directing units are used on adjacent sun exposure elevations.
2. Must be laid with exterior flutes vertical.
3. Cleanability is maintained by the smooth exterior flutes and lightly etched border.
4. Pattern description: Narrow vertical flutes and lightly etched border on both outside faces, horizontal flutes on both inside faces. Closely matches appearance of Prism Light-Directing unit.

NOTE: This block is supplied in the 7 3/4" sizes only.



**ESSEX**

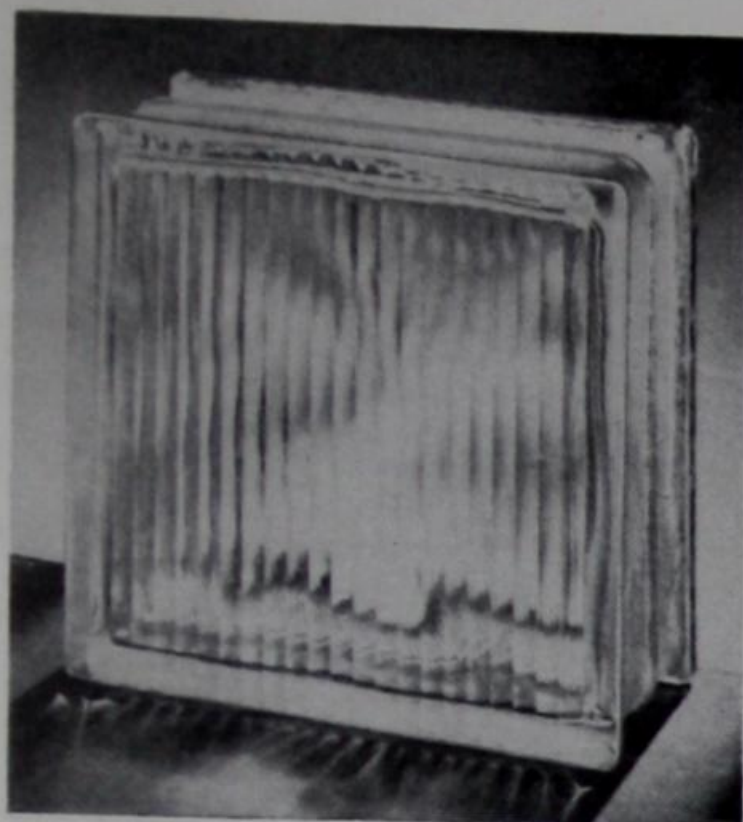
1. Specially designed for low light transmission. For use below eye-level in panels containing Prism Light-Directing Blocks and on elevations subjected to severe exposure to direct sunlight where Prism Light-Directing Blocks are not adaptable.
2. Must be laid with exterior flutes horizontal.
3. Pattern description: Horizontal spreading flutes and lightly etched borders on both exterior faces, vertical Prisms on both interior faces.

NOTE: This block is supplied in the 7 3/4" sizes only.



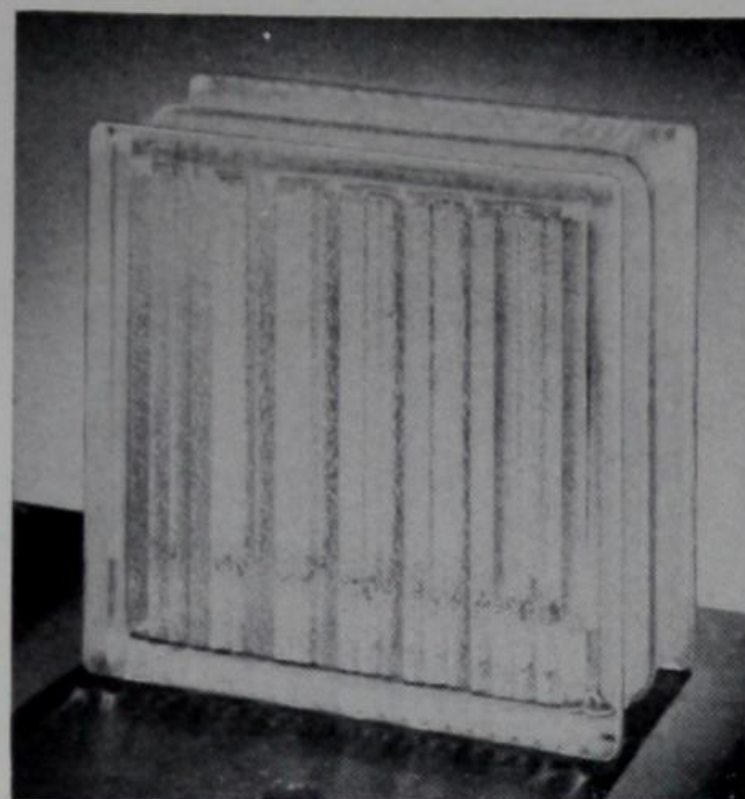
OF

# PC Glass Blocks



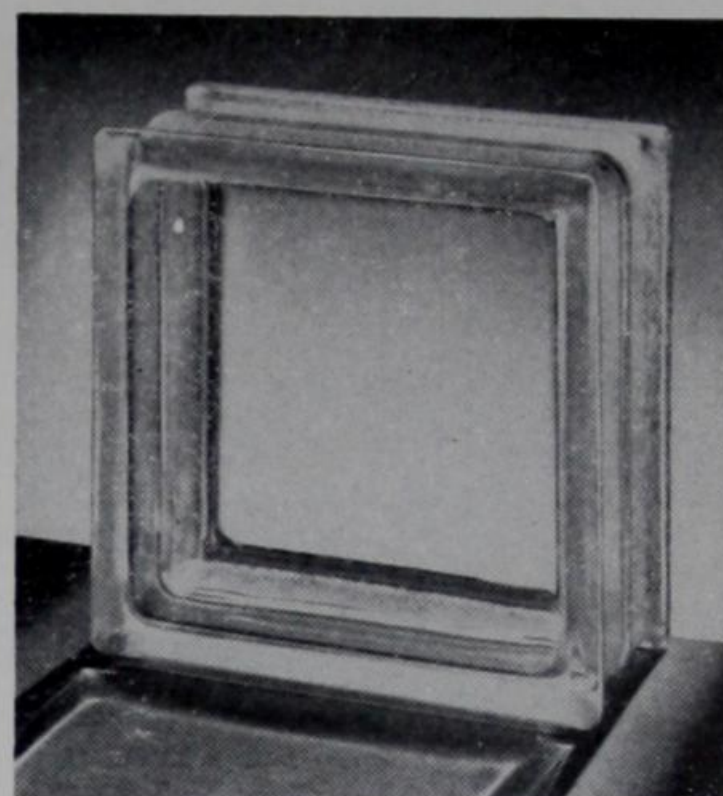
**REEDED-DECORA**

1. A modified Decora design to increase irregular pattern effects.
2. High light transmission with good diffusion and superior obscurity.
3. Should be laid with exterior reeds vertical.
4. Cleanability is maintained by the smoothly rounded exterior reeds.
5. Pattern description: Narrow parallel reeds on both exterior faces, asymmetric design on both interior faces.



**SAXON**

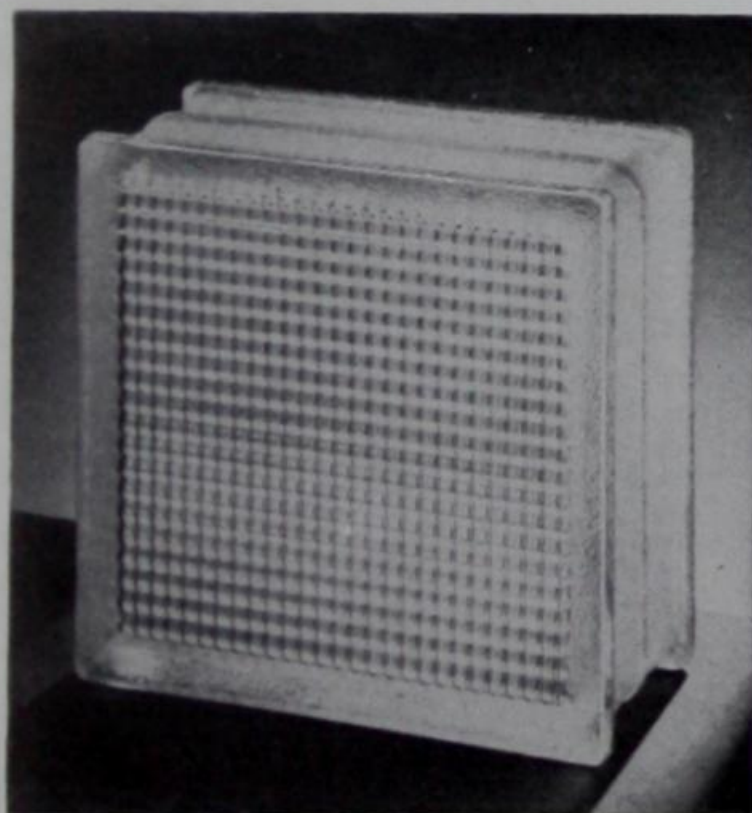
1. A pleasing uniform pattern designed for even light diffusion and brightness reduction, but with good light transmission.
2. Interior etched surfaces with exterior reeds produce maximum obscurity.
3. Should be laid with exterior reeds vertical.
4. Cleanability is maintained by the smoothly rounded exterior reeds.
5. Pattern description: Narrow parallel reeds on both exterior faces, parallel to wide flutes on both interior faces. Both interior faces are etched.



**VUE**

1. A pattern employing clear glass surfaces to permit sufficient general vision of large objects or movements beyond the panel to prevent the "shut-in" feeling. However, visibility of sharp details is not possible under most conditions.
2. High light transmission.
3. Cleanability is assured by smooth exterior surfaces.
4. Pattern description: Clear, smooth interior and exterior surfaces.

NOTE: This block is supplied in the 7 3/4" sizes only.



**PRISM LIGHT-DIRECTING**

1. Specially designed to control the direction of sunlight transmitted by the block, and under proper conditions, to provide improved natural illumination.
2. By means of unlike prisms on the two inside faces, the greater part of the transmitted light is directed upward — away from the direct vision or glare zone — to the ceiling where it may be reflected downward to provide indirect "daylighting."

3. Can be set in one position only — block is marked to indicate correct setting. Must not be used below eye level. For lower portions of panels below eye level use Essex Blocks.
4. Smooth vertical exterior flutes and lightly etched border insure easy cleaning.
5. Pattern description: Narrow vertical flutes and etched border on both outside faces, horizontal prisms on both inside faces.

NOTE: This block is supplied in 7 3/4" size only.

(Subject to change without notice)

PATTERNS	SIZES AND SHAPES AVAILABLE					
	5 3/4" Square	7 3/4" Square	11 3/4" Square	5 3/4" Corner	7 3/4" Corner	7 3/4" Radial
Argus	•	•	•	•	•	•
Argus Parallel Flutes	•	•	•	•	•	•
Bristol	•	•	•	•	•	•
Decora	•	•	•	•	•	•
Druid	•	•	•	•	•	•
Essex	•	•	•	•	•	•
Prism Light-Directing	•	•	•	•	•	•
Reeded-Decora	•	•	•	•	•	•
Saxon	•	•	•	•	•	•
Vue	•	•	•	•	•	•

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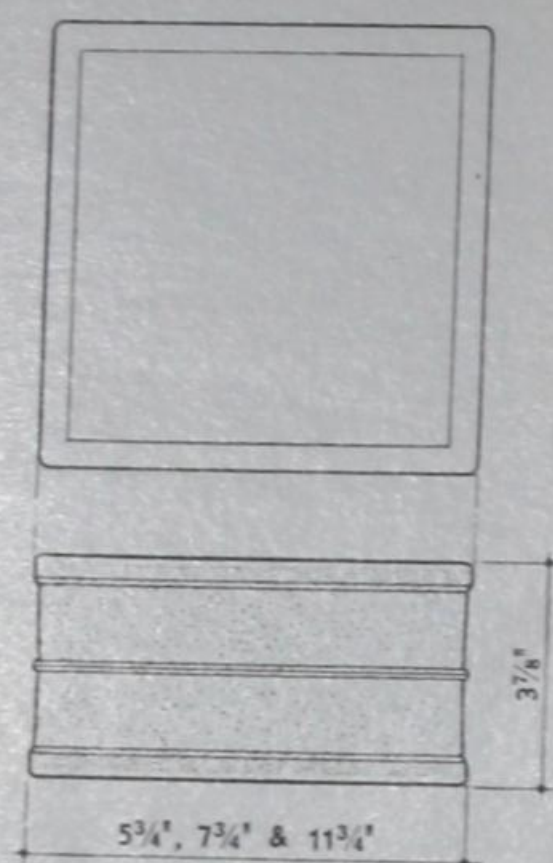


# PC Glass Blocks

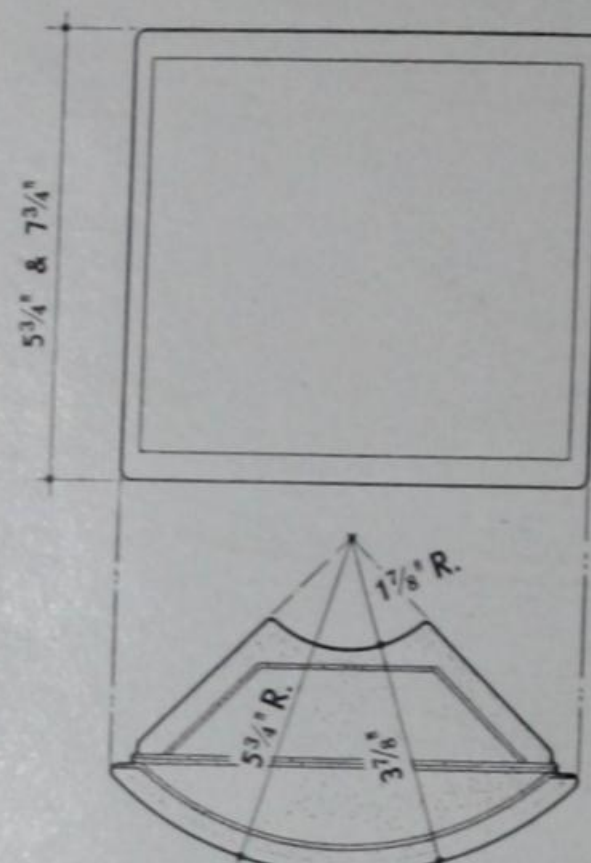
— A MODULAR  
PRODUCT\*

## SIZES AND SHAPES AVAILABLE

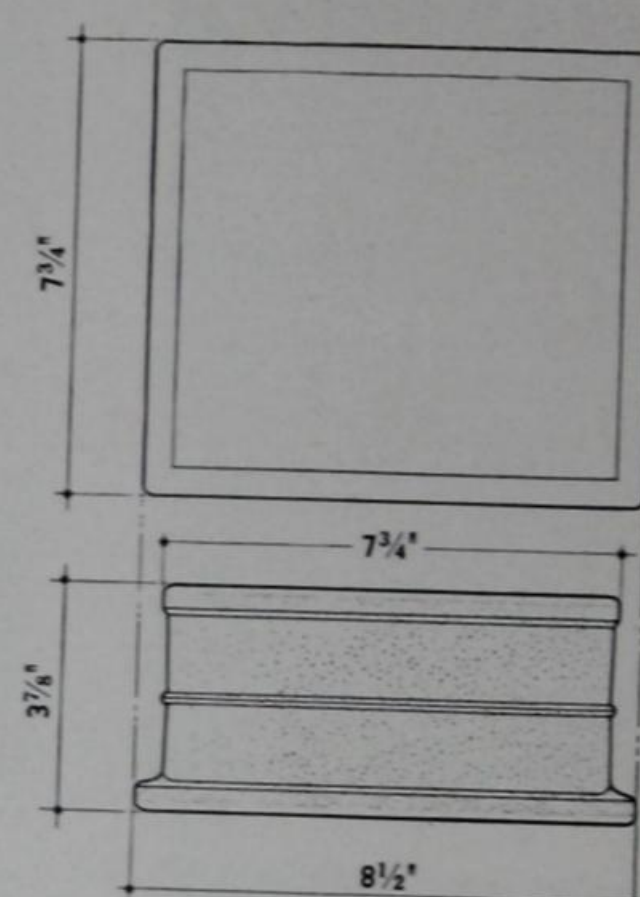
### SQUARE BLOCKS



### CORNER BLOCKS



### RADIAL BLOCKS



\*PC Glass Blocks have Standard Coordinated Dimensions, and meet the requirements of American Standards Association Project A62, and conform to the American Standard Basis for Coordination A62.1-1945.



**PITTSBURGH NV-3389 WATERPROOFING COMPOUND**—To be added to the mortar to conform with PC specifications. Use one (1) quart per bag of cement. Available in one-quart, one-gallon, and five-gallon containers.



These PC accessory materials can be obtained from all suppliers of PC Glass Blocks



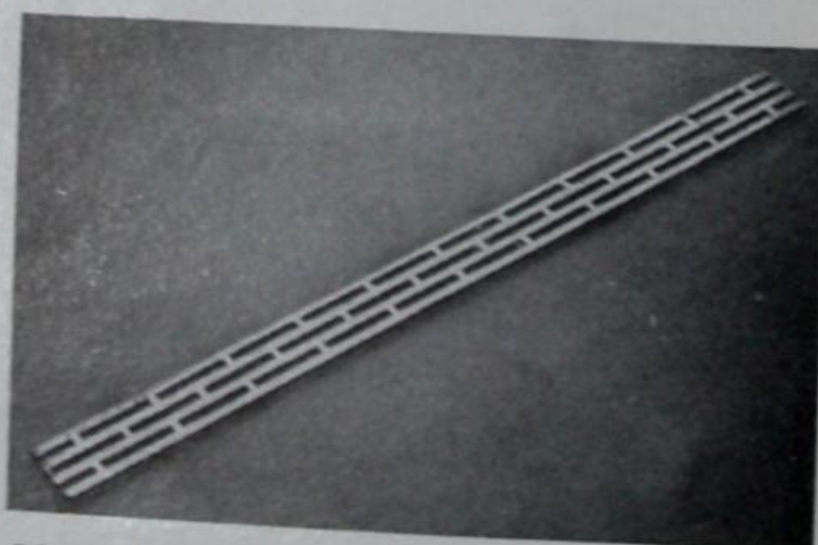
**PC ASPHALT EMULSION** — To be used on all sills to form a waterproof joint. Also used to adhere expansion strips to side and head jambs before installing glass blocks. See specifications for proper application. For sills and heading of expansion strips, estimate one (1) gallon for approximately 150 lin. ft. Available in one-quart, one-gallon, and five-gallon containers.



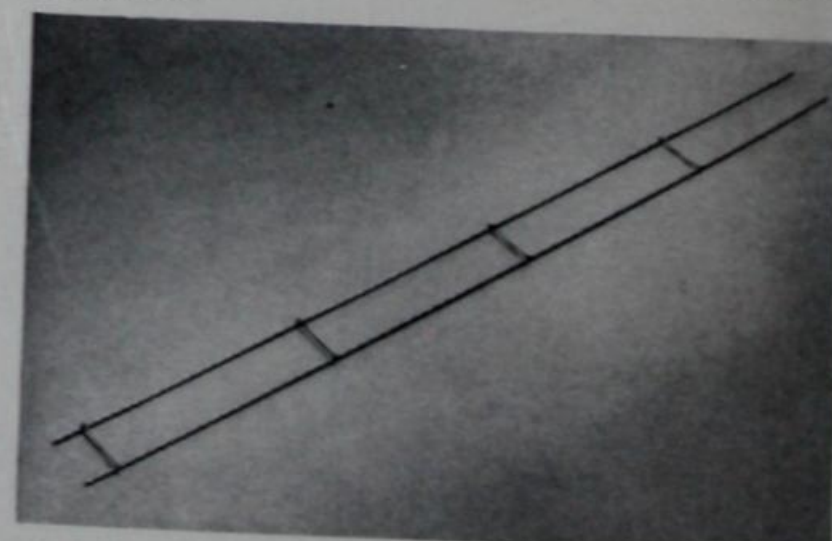
**PC EXPANSION STRIPS**—To be used in expansion spaces at side and head jambs installed in accordance with PC specifications.

Available in the following sizes:  
 $\frac{1}{8}'' \times 4 \frac{1}{8}'' \times 25''$   
 $\frac{3}{8}'' \times 4 \frac{1}{8}'' \times 25''$  (For use in chase construction)

For wall anchor construction, standard  $4 \frac{1}{8}''$  wide strips can easily be cut to 3" width required.



**PC WALL ANCHORS** — To be used for supporting panels up to 100 sq. ft. in area where permitted by building code requirements. Spaced and installed in accordance with PC specifications. Wall Anchors are No. 20 gauge perforated steel galvanized after fabrication. Available in 2'-0" lengths,  $1 \frac{3}{4}''$  wide.

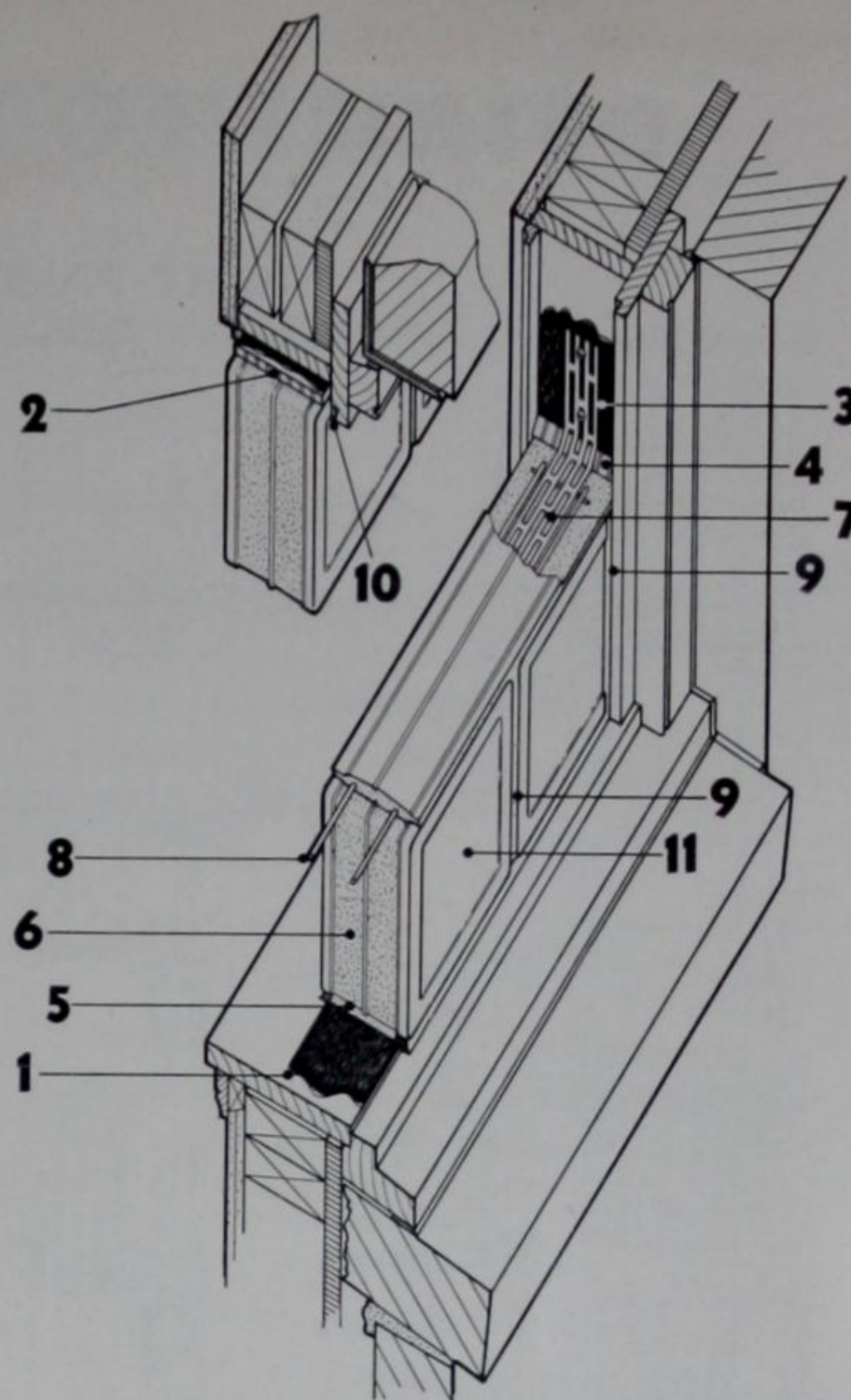


**PC WALL TIES** — To be used in horizontal joints of glass block panels, spaced and installed in accordance with PC specifications. Wall ties are formed of two No. 9 galvanized wires spaced 2" apart with No. 14 galvanized cross wires welded every 8". Available in 8' lengths.



# HOW TO INSTALL PC GLASS BLOCKS

1. Apply heavy coat of PC Asphalt Emulsion to sill. Must be dry before blocks are set.
2. Adhere PC Expansion Strips to head with PC Asphalt Emulsion.
3. Fasten PC Wall Anchors loosely to side jambs and crimp as shown so that horizontal parts of anchors will be approximately 24" apart. Locate screws at approximately center of slots.
4. Adhere PC Expansion Strips to side jambs with PC Asphalt Emulsion. Place strips progressively as panel is erected so that strips can be cut and fitted around wall anchors.
5. Place full mortar bed at sill. Do not furrow.
6. Start lower course of blocks. All mortar joints must be full and not furrowed. Do not use steel tools to tap blocks into place. Continue setting additional courses of blocks up to first joint in which wall anchor will be bedded.
7. Place lower half of mortar bed for this joint. Do not furrow. Bed horizontal part of anchor in mortar. Then tighten anchor fastenings securely at side jambs. Cover wall anchors with mortar and proceed with installation of blocks.
8. Install PC Wall Ties in horizontal joints spaced according to PC Specifications. Wall ties shall generally occur in same joint as wall anchors. Wall ties must run from end to end of panel and where used continuously must lap 6". Wall ties must not bridge expansion joints. For installation of wall ties in horizontal mortar joints follow instructions under Item #7.
9. Strike joints smoothly as shown while mortar is still plastic and before final set. At this time rake out all joints requiring calking to a depth equal to the thickness of joint. Remove surplus mortar from faces of glass blocks and wipe dry.
10. Calk interior and exterior perimeter of panel as shown with calking compound as specified.
11. Final cleaning of glass block faces shall not be done until after final mortar set.



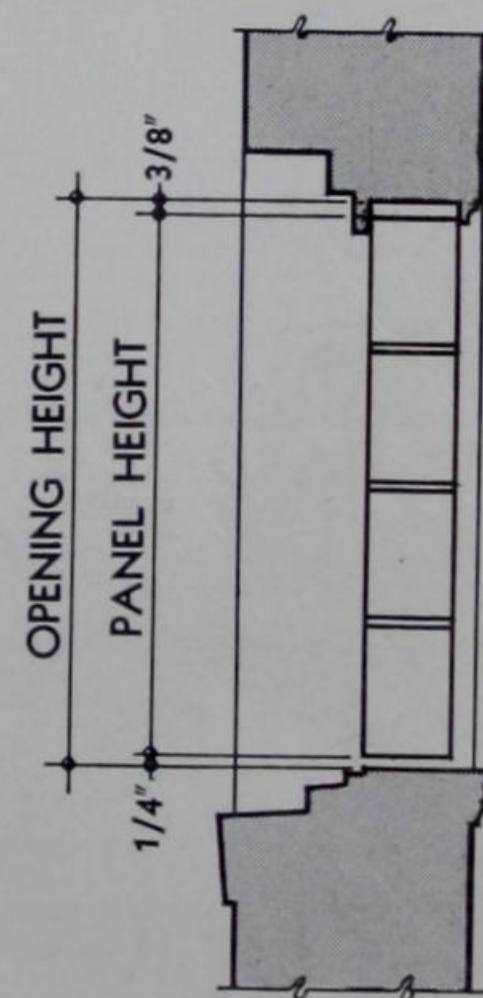
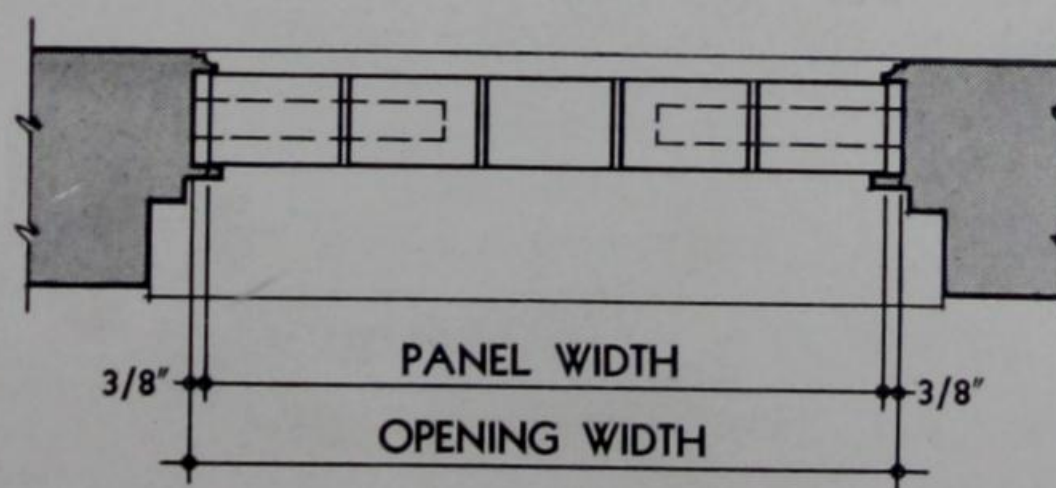
## LAYOUT TABLES FOR PC GLASS BLOCK RESIDENTIAL PANELS

Tables based on 1/4" mortar joints

5 3/4" SQUARE BLOCKS				7 3/4" SQUARE BLOCKS				11 3/4" SQUARE BLOCKS			
NO. OF UNITS	PANEL WIDTH OR HEIGHT	OPENING WIDTH	OPENING HEIGHT	NO. OF UNITS	PANEL WIDTH OR HEIGHT	OPENING WIDTH	OPENING HEIGHT	NO. OF UNITS	PANEL WIDTH OR HEIGHT	OPENING WIDTH	OPENING HEIGHT
1	5 3/4"	6 1/2"	6 3/8"	1	7 3/4"	8 1/2"	8 3/8"	1	11 3/4"	1'-0 1/2"	1'-0 3/8"
2	11 3/4"	1'-0 1/2"	1'-0 3/8"	2	1'-3 3/4"	1'-4 1/2"	1'-4 3/8"	2	1'-11 3/4"	2'-0 1/2"	2'-0 3/8"
3	1'-5 3/4"	1'-6 1/2"	1'-6 3/8"	3	1'-11 3/4"	2'-0 1/2"	2'-0 3/8"	3	2'-11 3/4"	3'-0 1/2"	3'-0 3/8"
4	1'-11 3/4"	2'-0 1/2"	2'-0 3/8"	4	2'-7 3/4"	2'-8 1/2"	2'-8 3/8"	4	3'-11 3/4"	4'-0 1/2"	4'-0 3/8"
5	2'-5 3/4"	2'-6 1/2"	2'-6 3/8"	5	3'-3 3/4"	3'-4 1/2"	3'-4 3/8"	5	4'-11 3/4"	5'-0 1/2"	5'-0 3/8"
6	2'-11 3/4"	3'-0 1/2"	3'-0 3/8"	6	3'-11 3/4"	4'-0 1/2"	4'-0 3/8"	6	5'-11 3/4"	6'-0 1/2"	6'-0 3/8"
7	3'-5 3/4"	3'-6 1/2"	3'-6 3/8"	7	4'-7 3/4"	4'-8 1/2"	4'-8 3/8"	7	6'-11 3/4"	7'-0 1/2"	7'-0 3/8"
8	3'-11 3/4"	4'-0 1/2"	4'-0 3/8"	8	5'-3 3/4"	5'-4 1/2"	5'-4 3/8"	8	7'-11 3/4"	8'-0 1/2"	8'-0 3/8"
9	4'-5 3/4"	4'-6 1/2"	4'-6 3/8"	9	5'-11 3/4"	6'-0 1/2"	6'-0 3/8"	9	8'-11 3/4"	9'-0 1/2"	9'-0 3/8"
10	4'-11 3/4"	5'-0 1/2"	5'-0 3/8"	10	6'-7 3/4"	6'-8 1/2"	6'-8 3/8"	10	9'-11 3/4"	10'-0 1/2"	10'-0 3/8"
11	5'-5 3/4"	5'-6 1/2"	5'-6 3/8"	11	7'-3 3/4"	7'-4 1/2"	7'-4 3/8"				
12	5'-11 3/4"	6'-0 1/2"	6'-0 3/8"	12	7'-11 3/4"	8'-0 1/2"	8'-0 3/8"				
13	6'-5 3/4"	6'-6 1/2"	6'-6 3/8"	13	8'-7 3/4"	8'-8 1/2"	8'-8 3/8"				
14	6'-11 3/4"	7'-0 1/2"	7'-0 3/8"	14	9'-3 3/4"	9'-4 1/2"	9'-4 3/8"				
15	7'-5 3/4"	7'-6 1/2"	7'-6 3/8"	15	9'-11 3/4"	10'-0 1/2"	10'-0 3/8"				
16	7'-11 3/4"	8'-0 1/2"	8'-0 3/8"								
17	8'-5 3/4"	8'-6 1/2"	8'-6 3/8"								
18	8'-11 3/4"	9'-0 1/2"	9'-0 3/8"								
19	9'-5 3/4"	9'-6 1/2"	9'-6 3/8"								
20	9'-11 3/4"	10'-0 1/2"	10'-0 3/8"								

### LIMITATIONS

MAX. AREA 100 SQ. FT.  
MAX. HEIGHT 10 FT.  
MAX. WIDTH 10 FT.

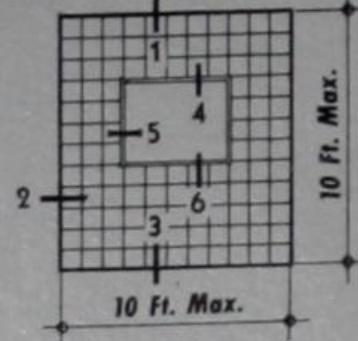
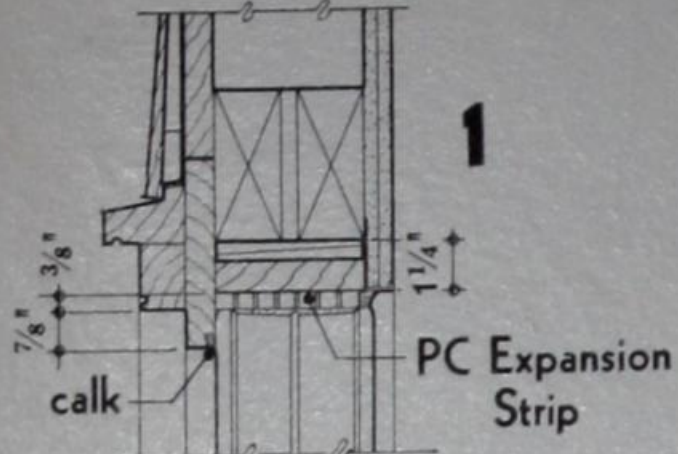




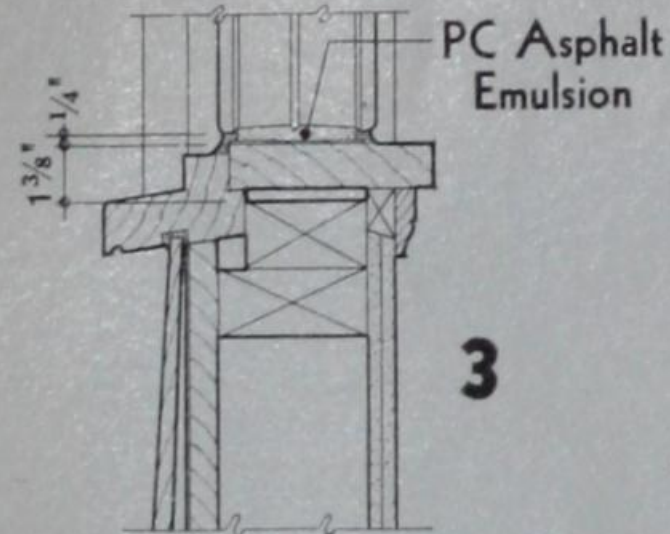
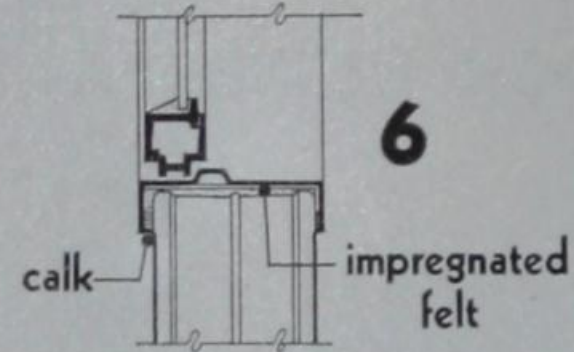
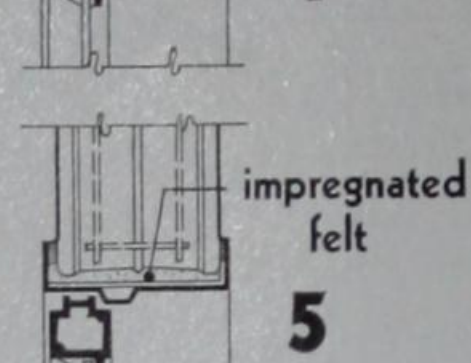
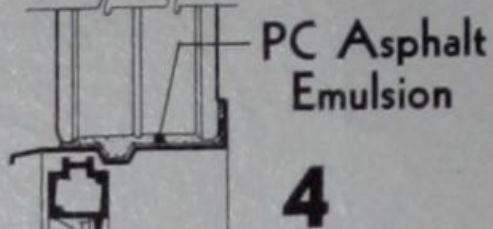
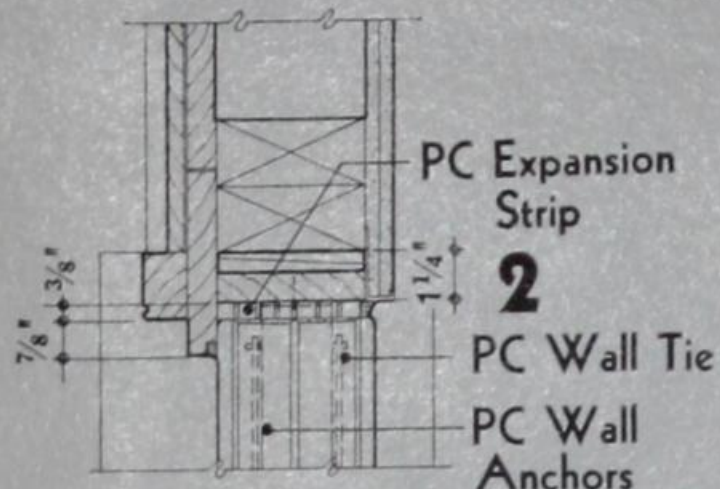
# DETAILS FOR EXTERIOR OPENINGS

## SIMPLE PANELS 100 SQ. FT. MAX. AREA

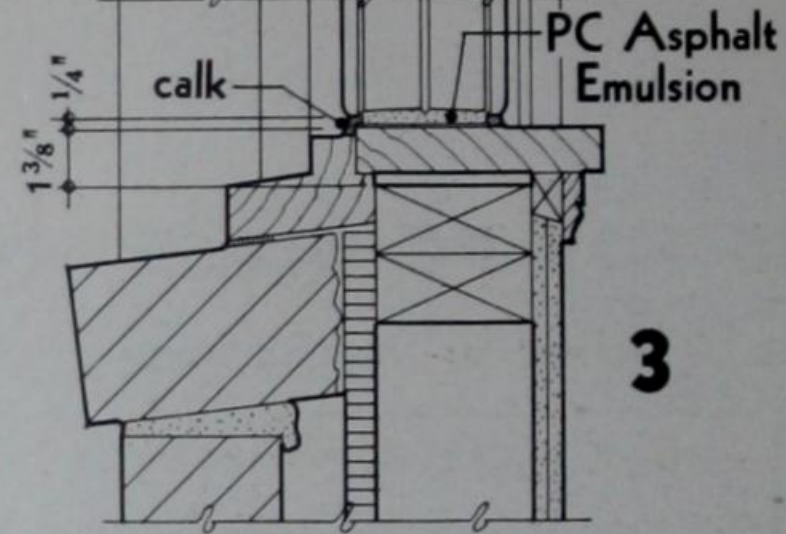
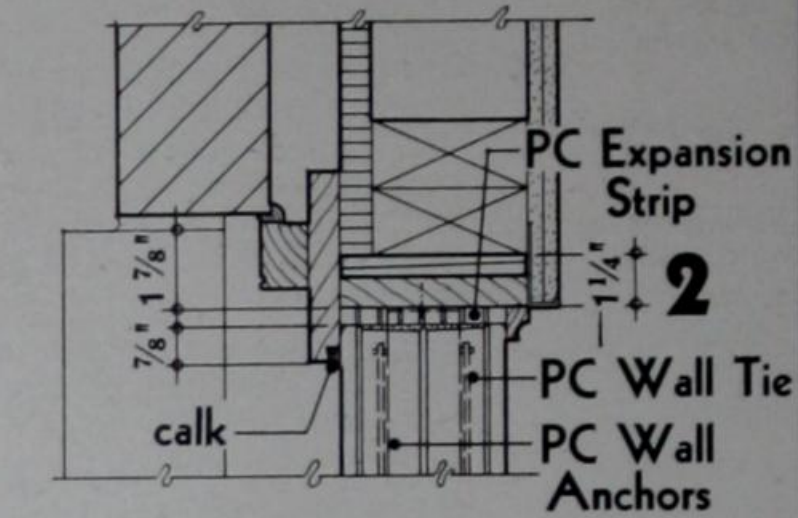
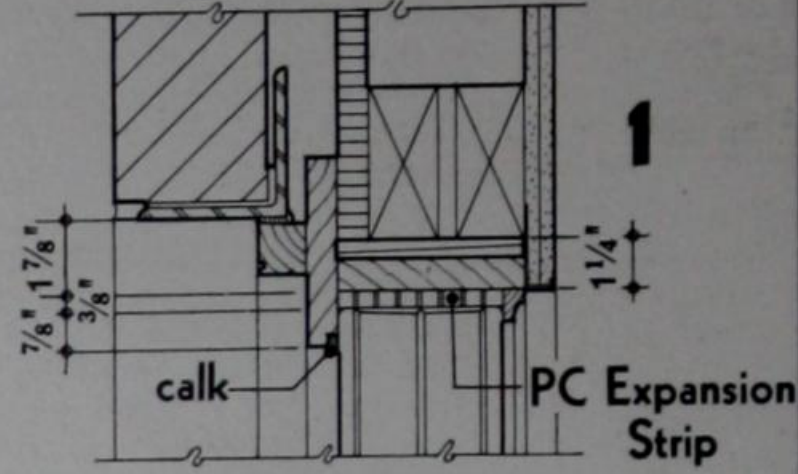
### WOOD FRAME



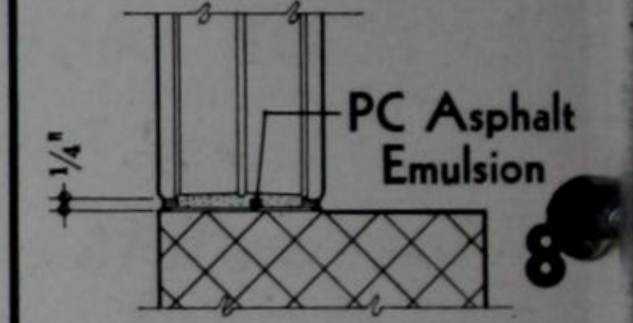
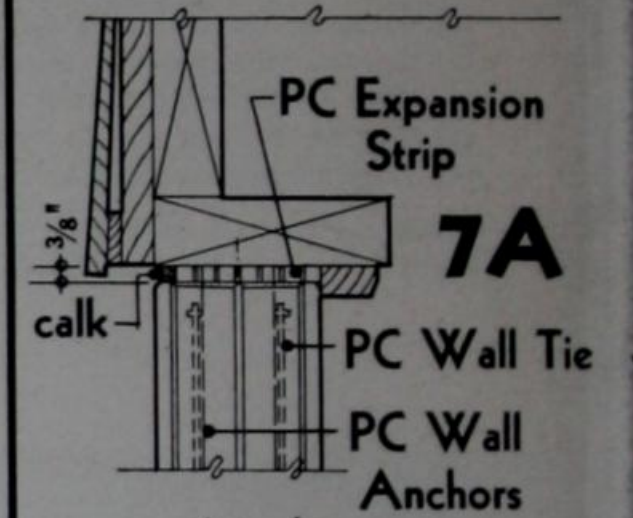
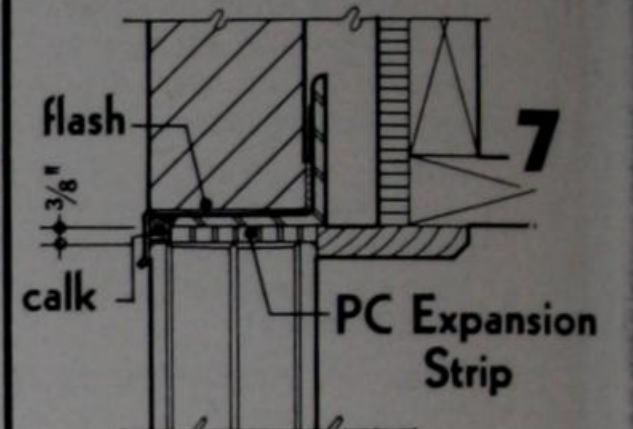
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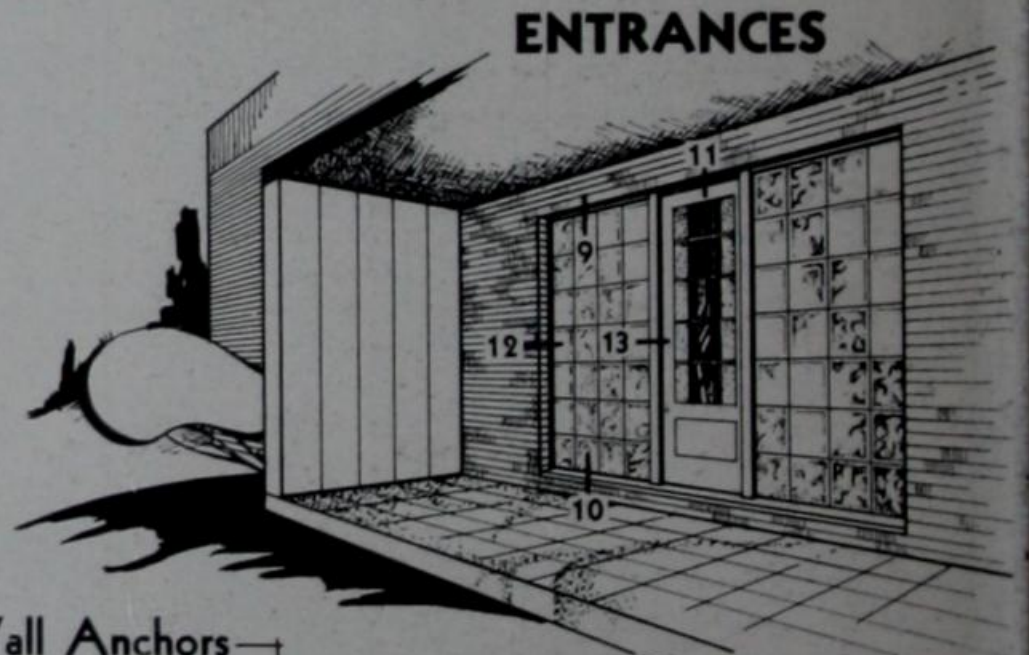
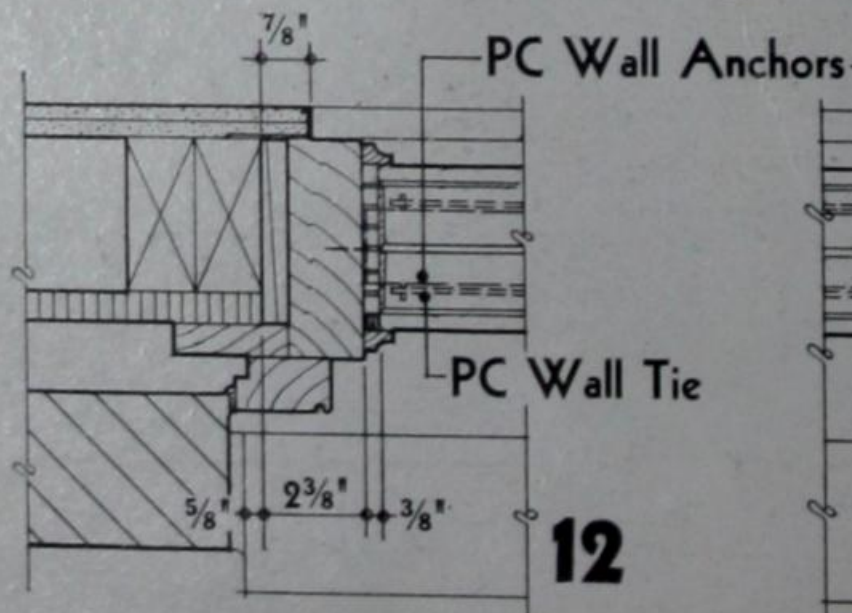
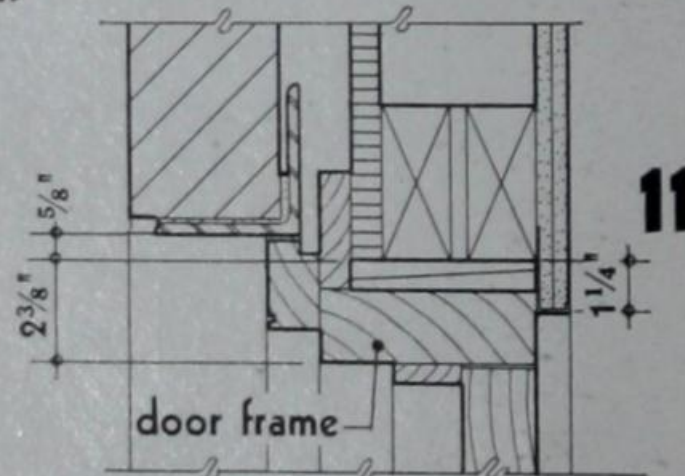
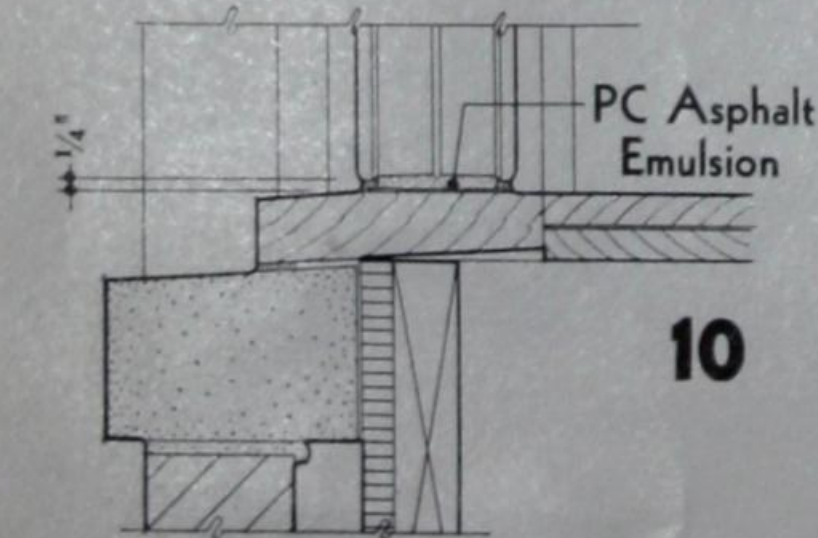
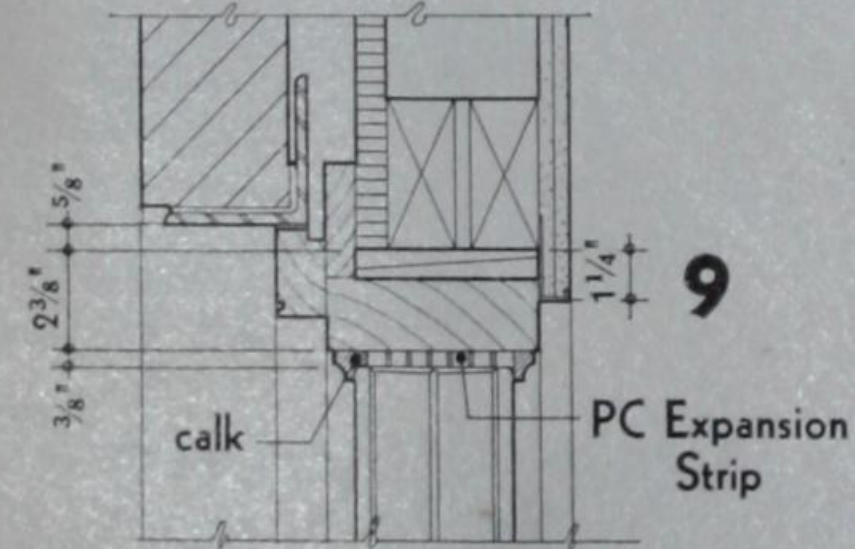
### BRICK VENEER



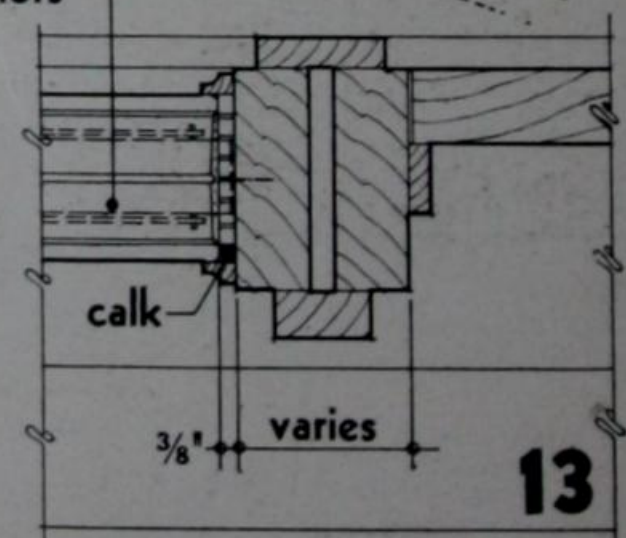
## BASEMENT PANELS



### BRICK VENEER



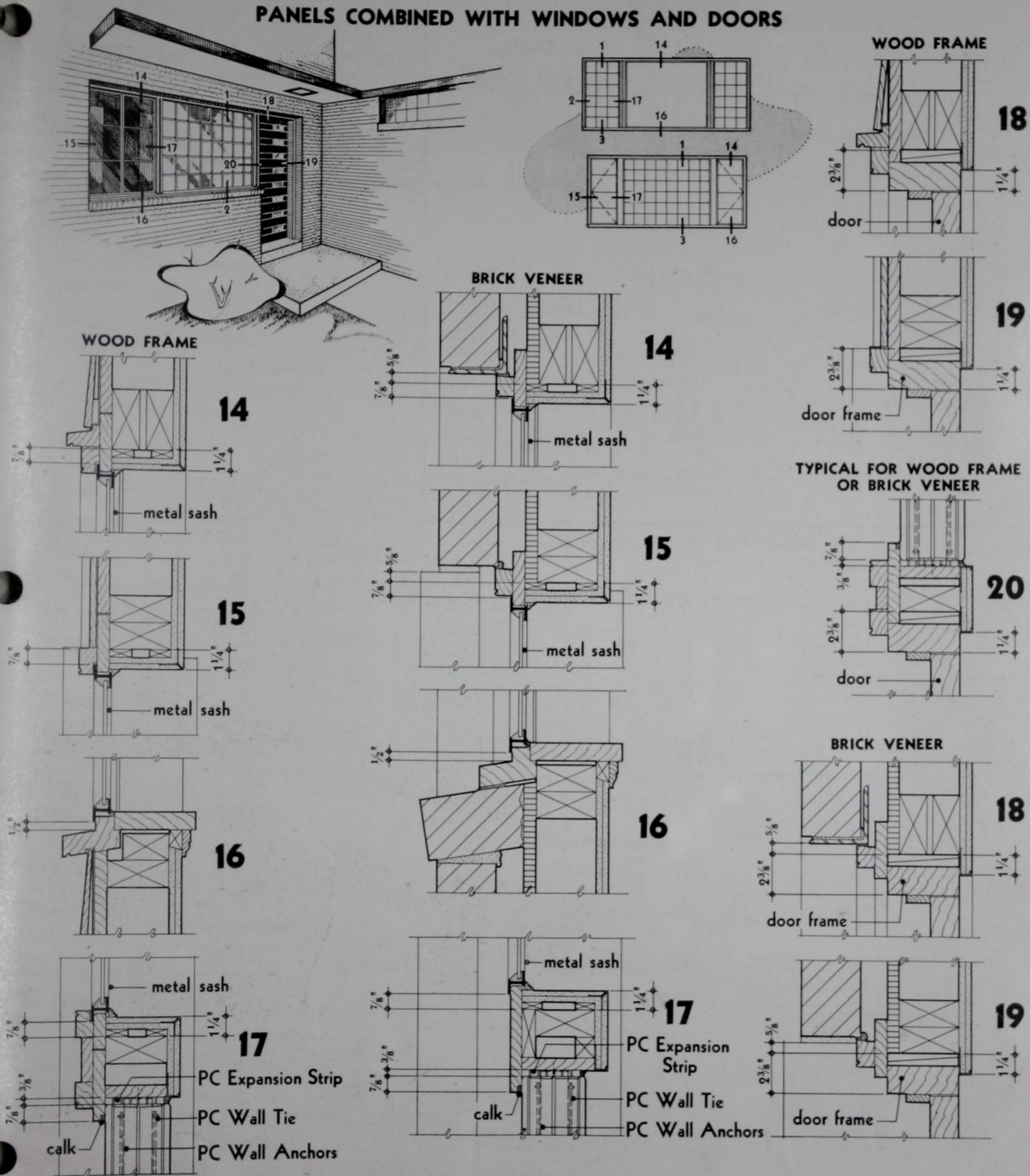
## ENTRANCES





# DETAILS FOR EXTERIOR OPENINGS

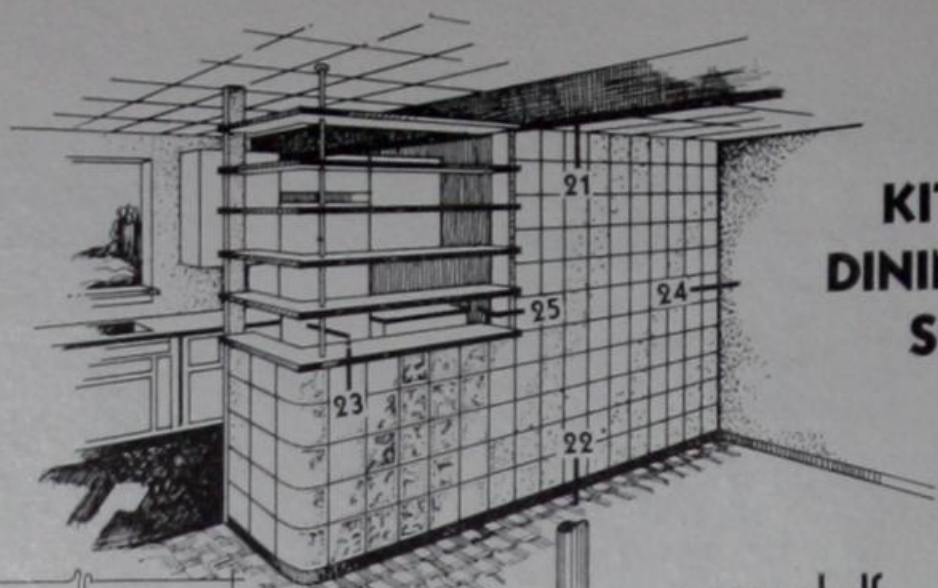
## PANELS COMBINED WITH WINDOWS AND DOORS



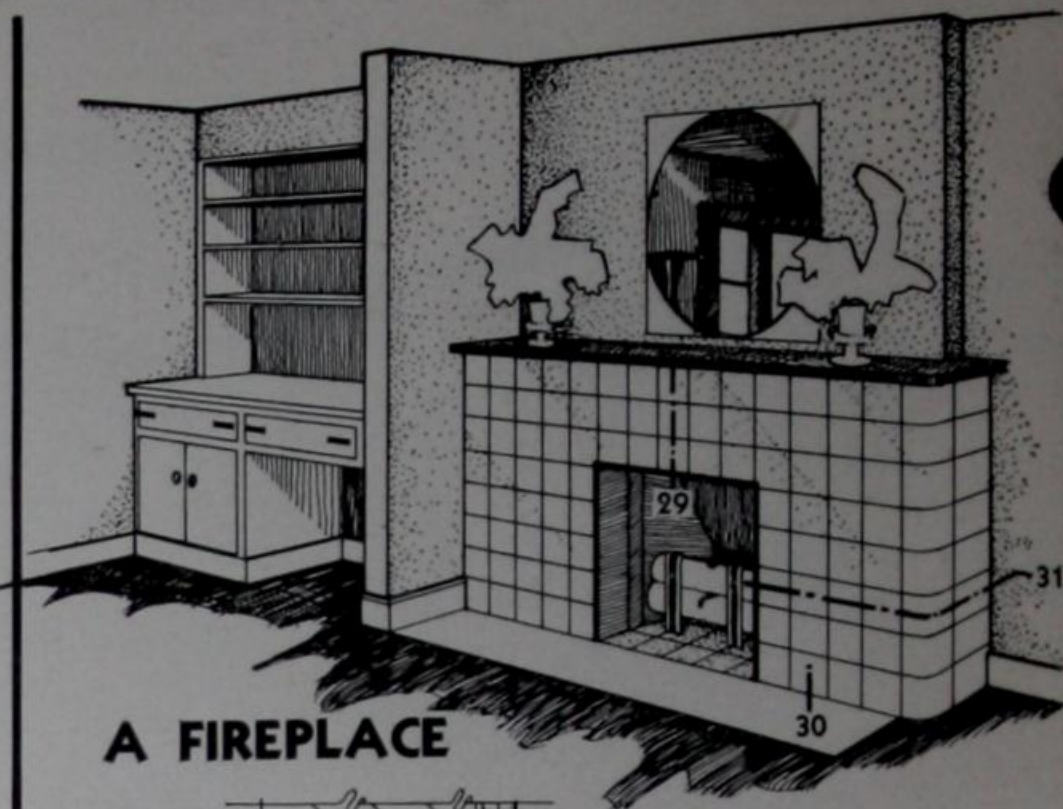
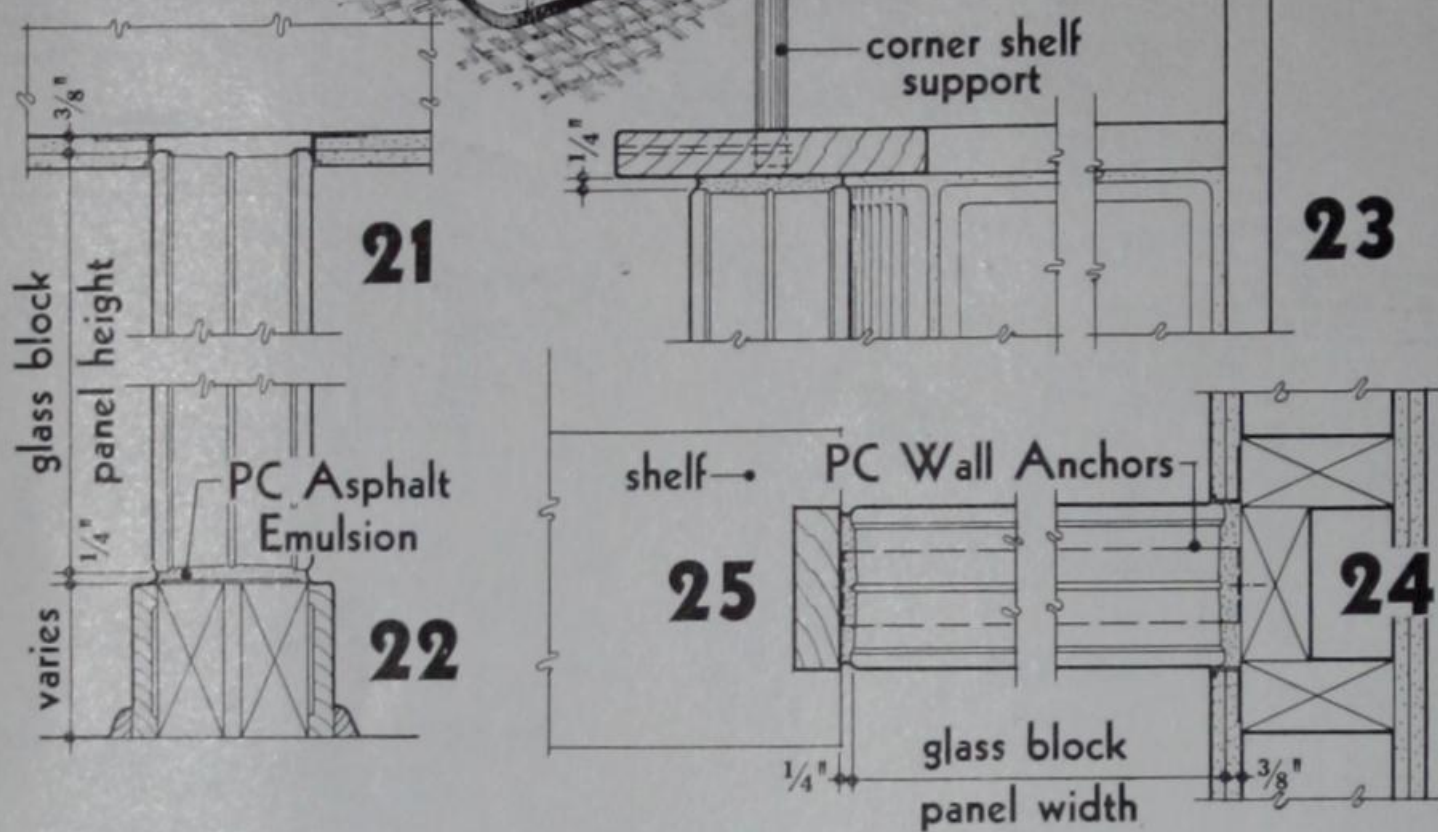
the mark of a modern home !



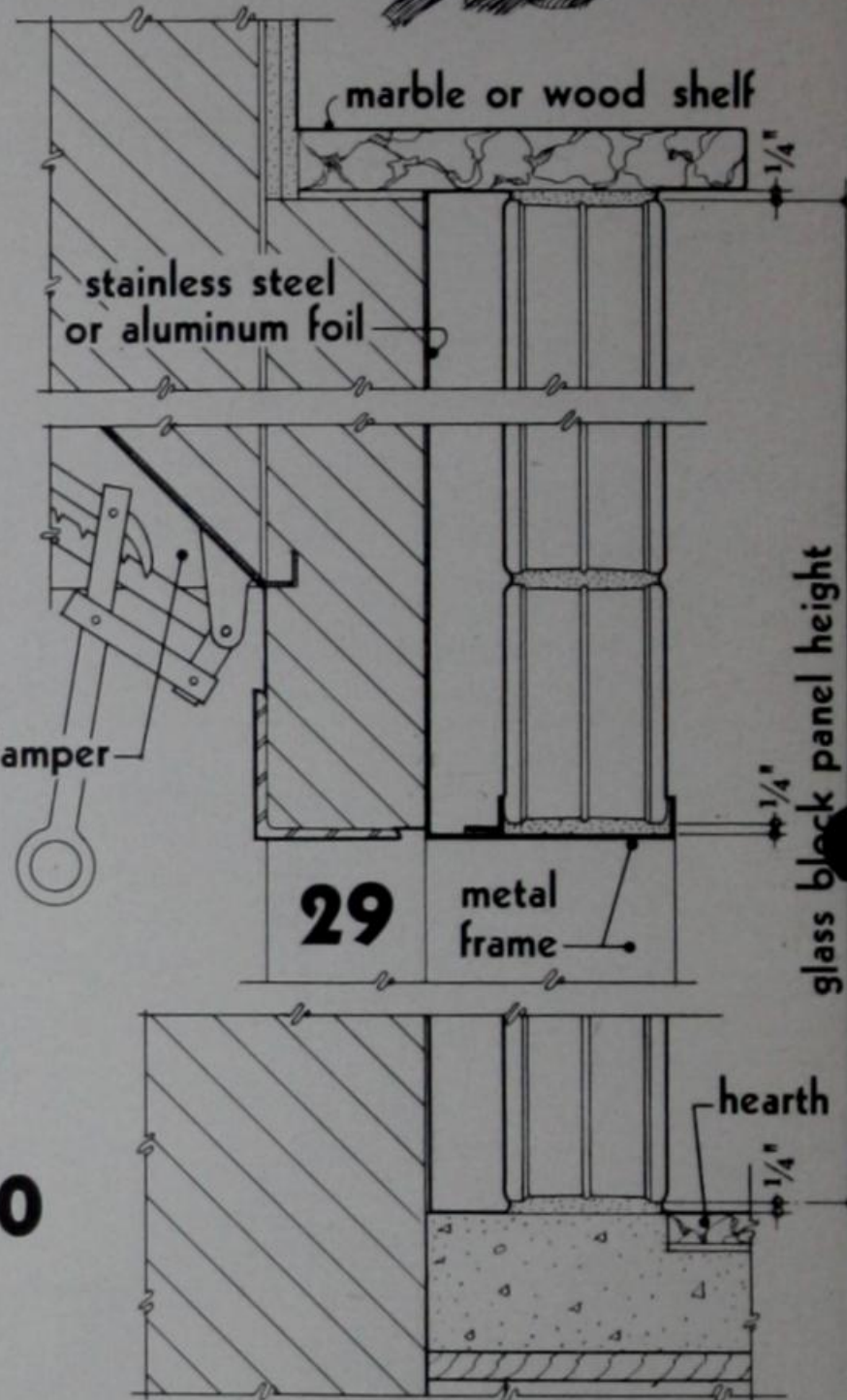
# DETAILS FOR SPECIAL EXTERIOR AND INTERIOR USES



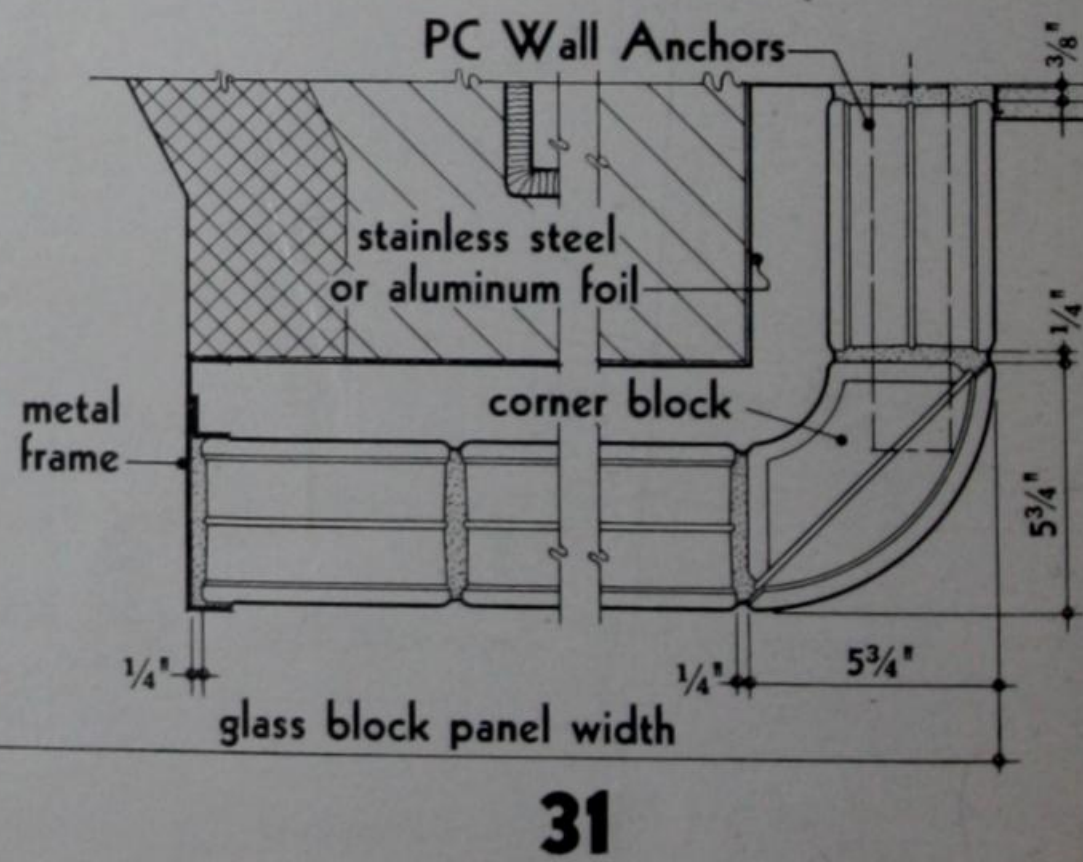
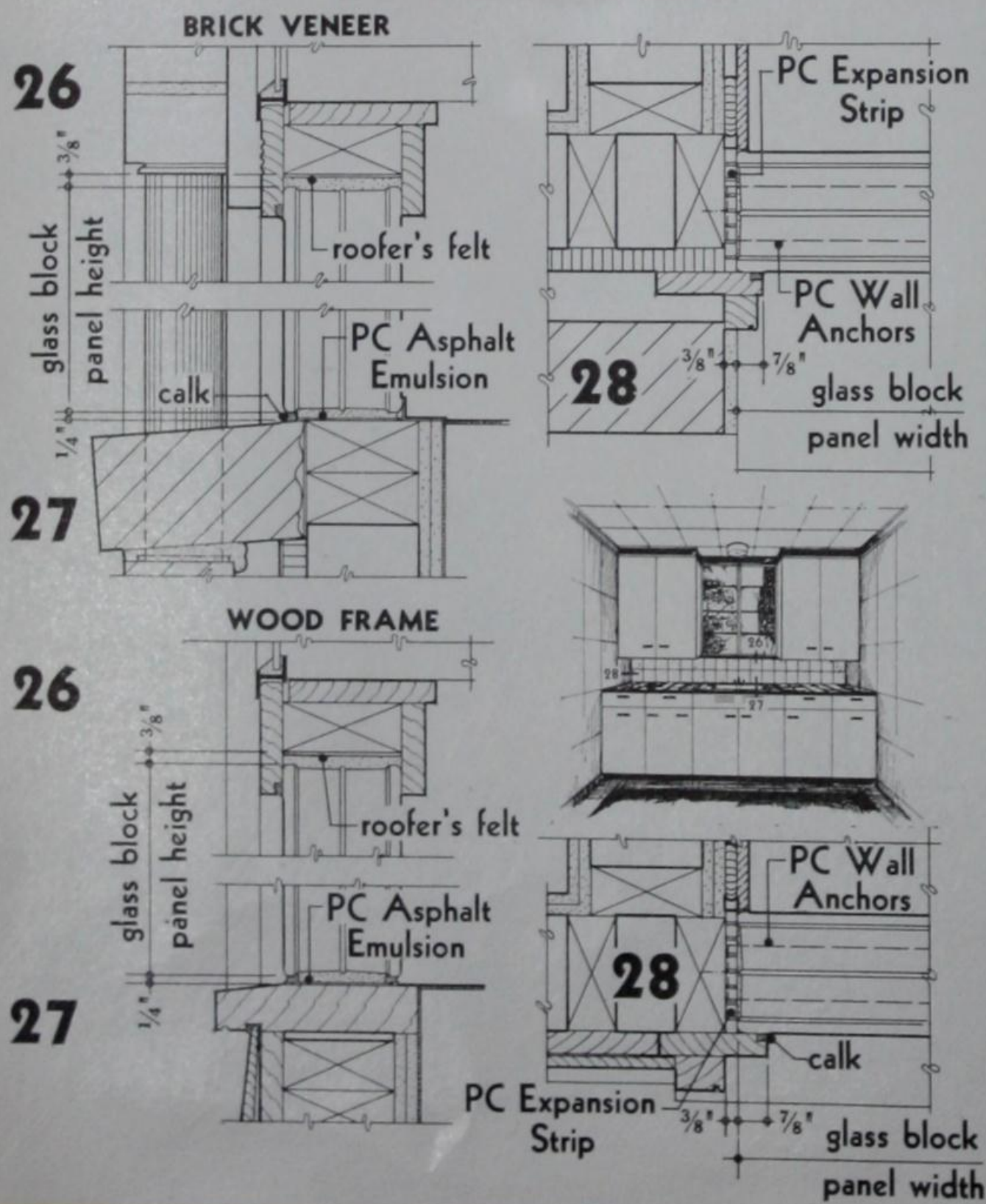
KITCHEN,  
DINING ROOM  
SCREEN



A FIREPLACE



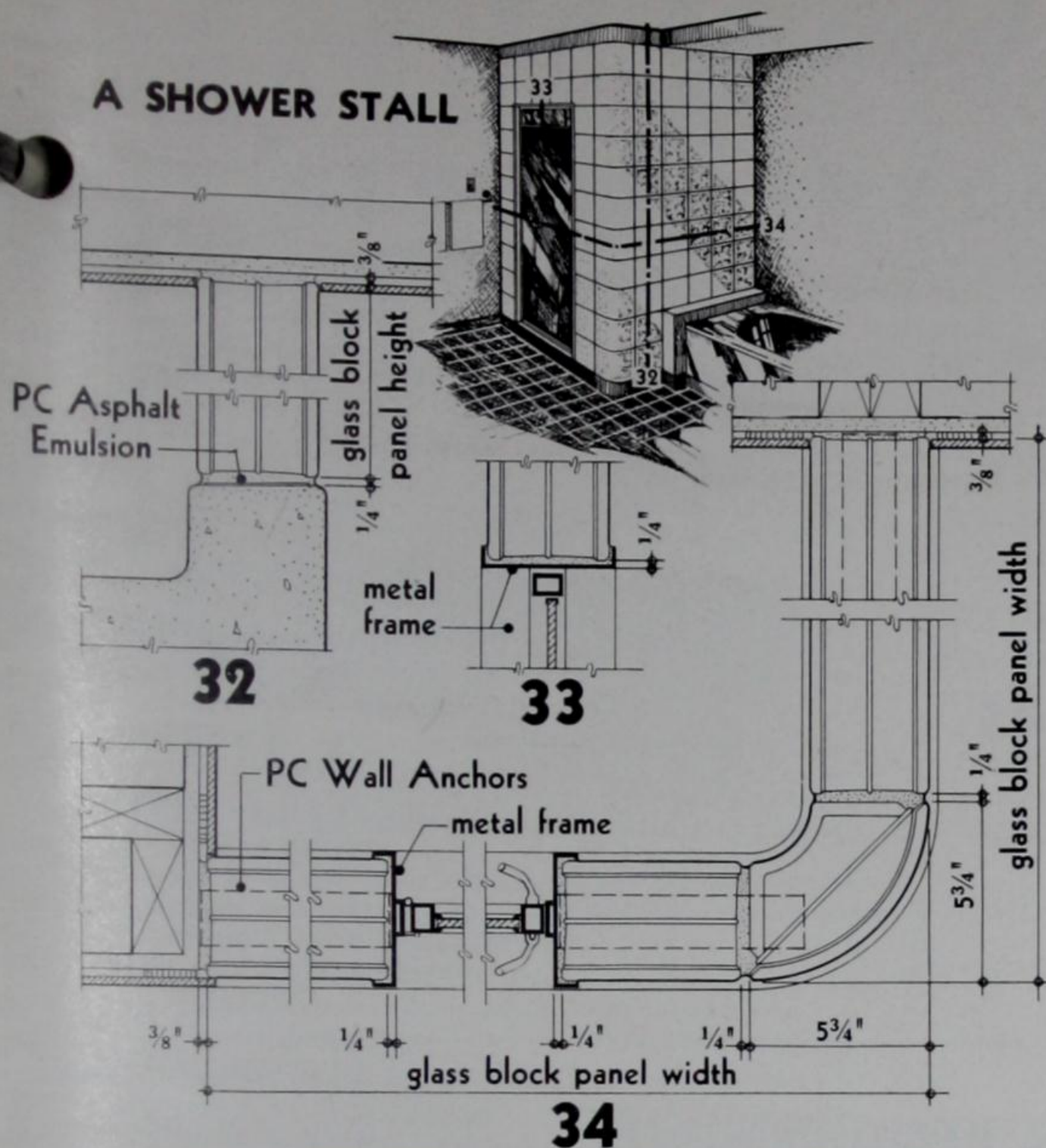
## WORKSPACE PANELS



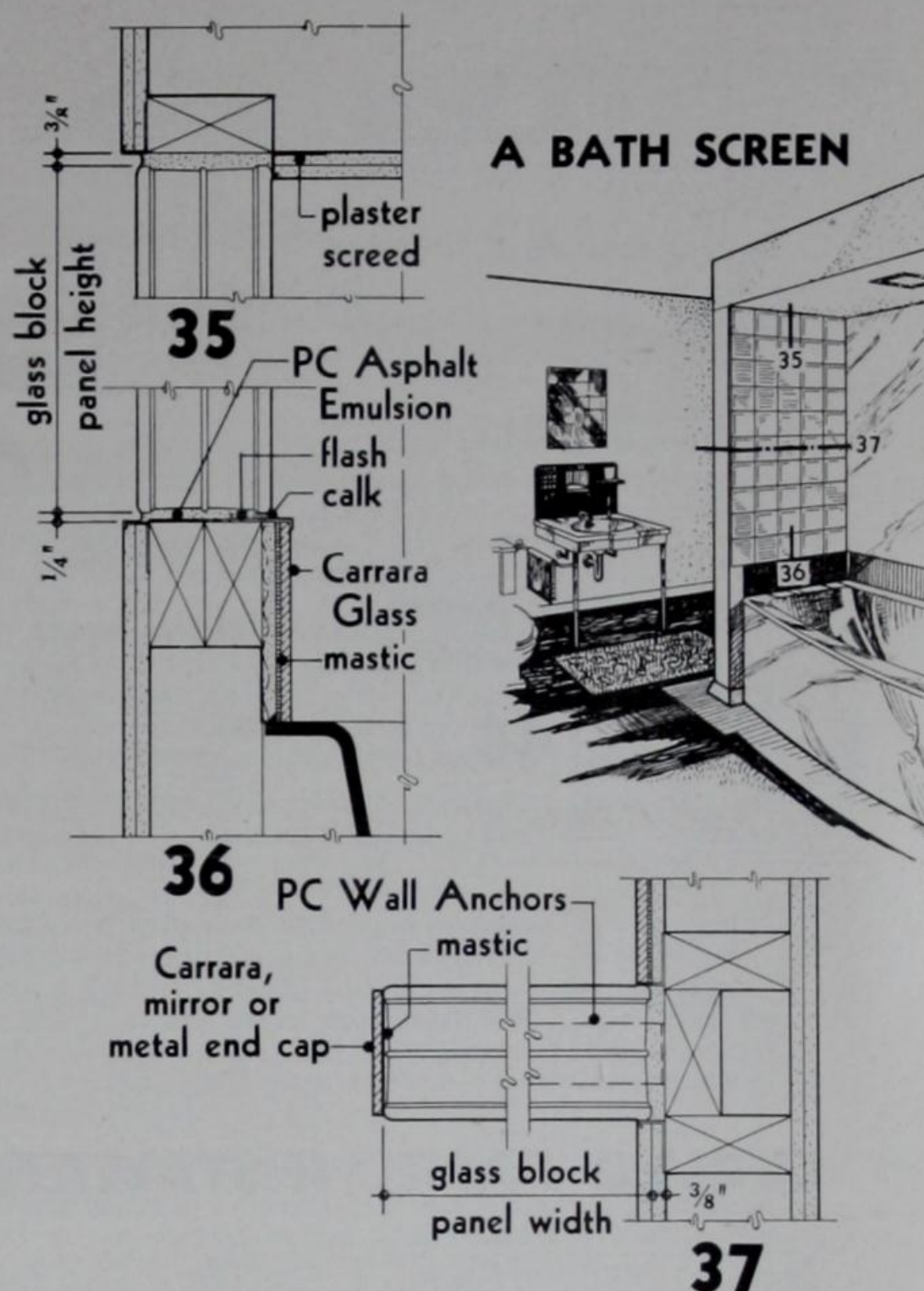


# DETAILS FOR SPECIAL INTERIOR USES

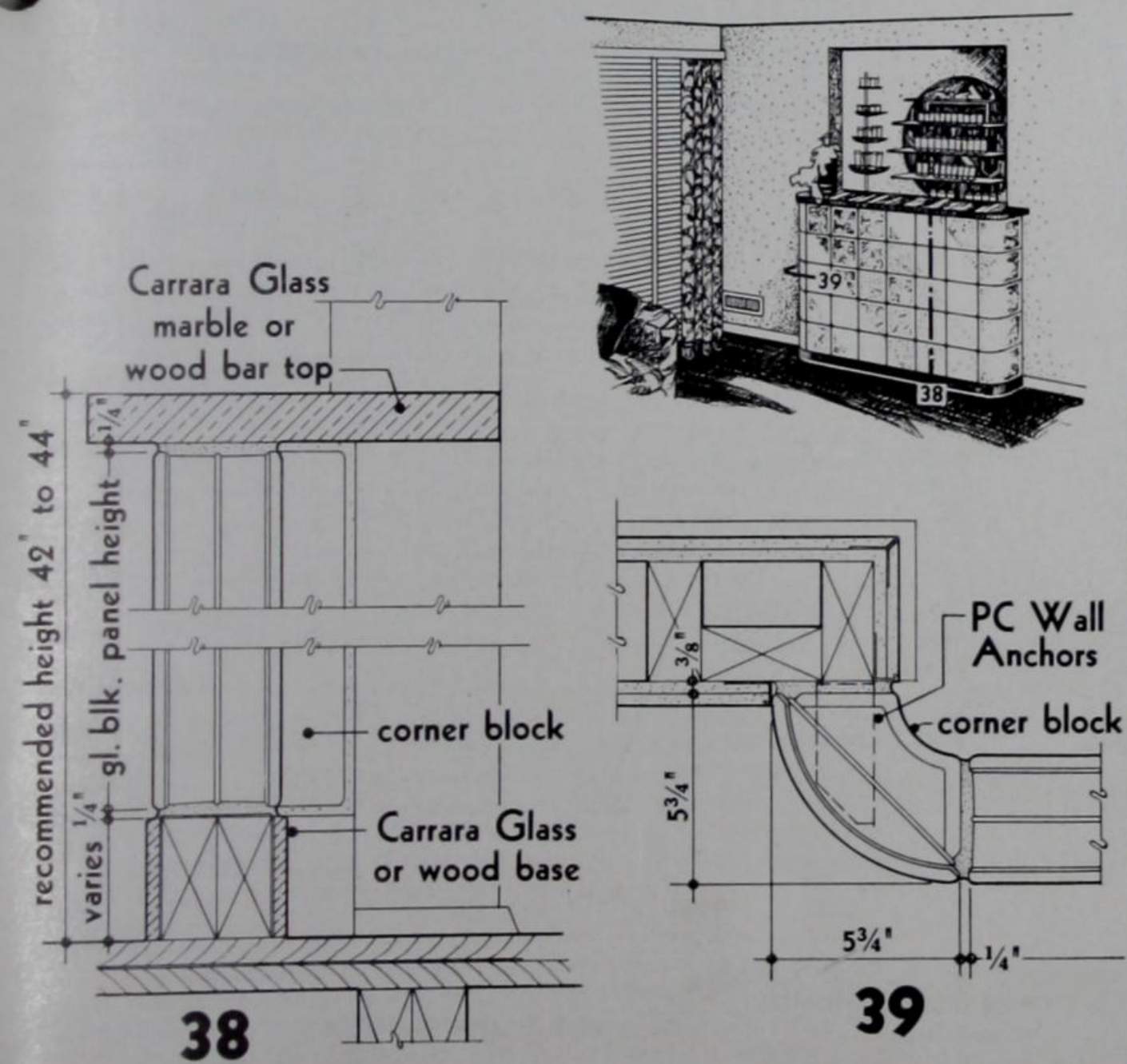
## A SHOWER STALL



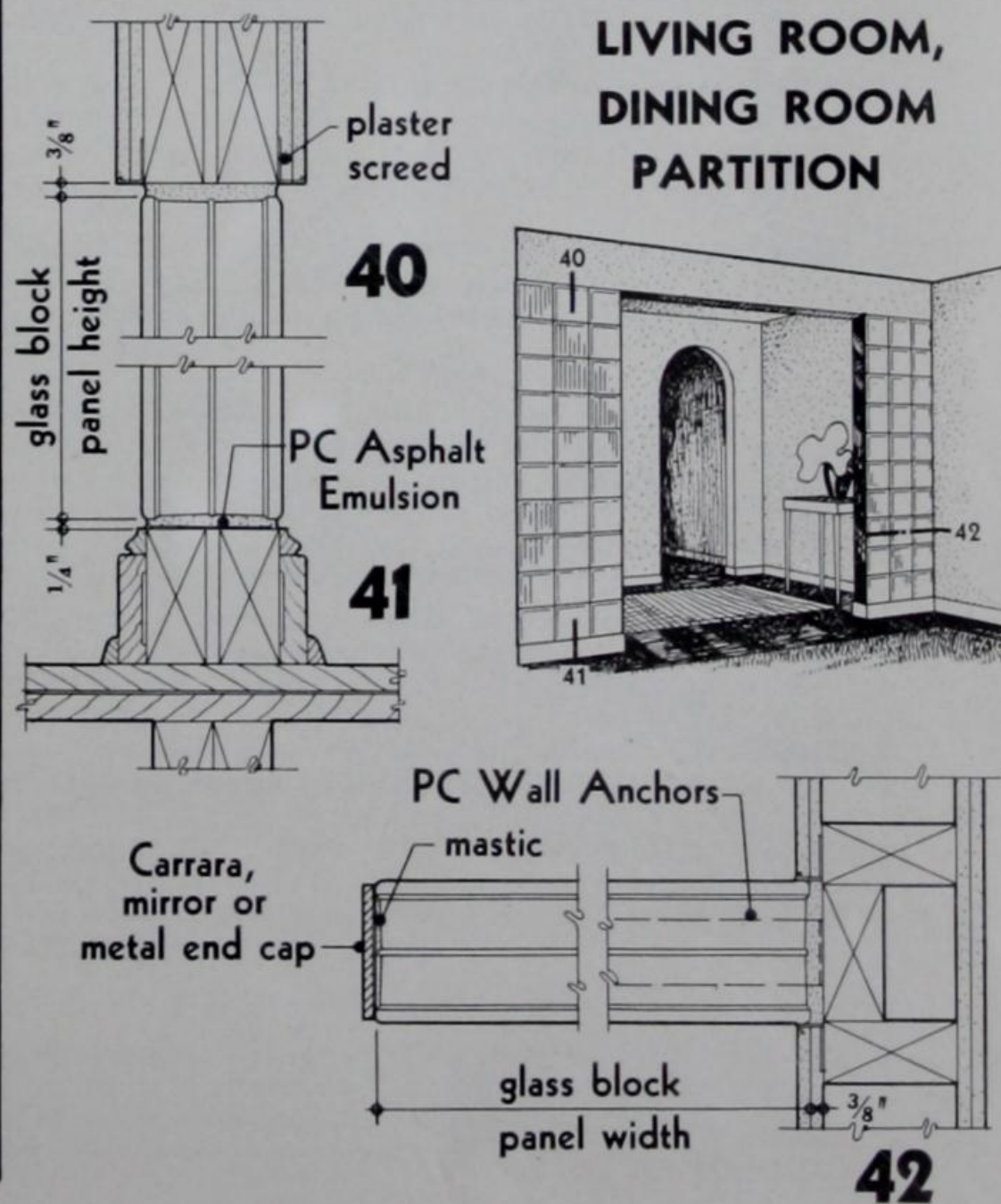
## A BATH SCREEN



## A SMALL BAR

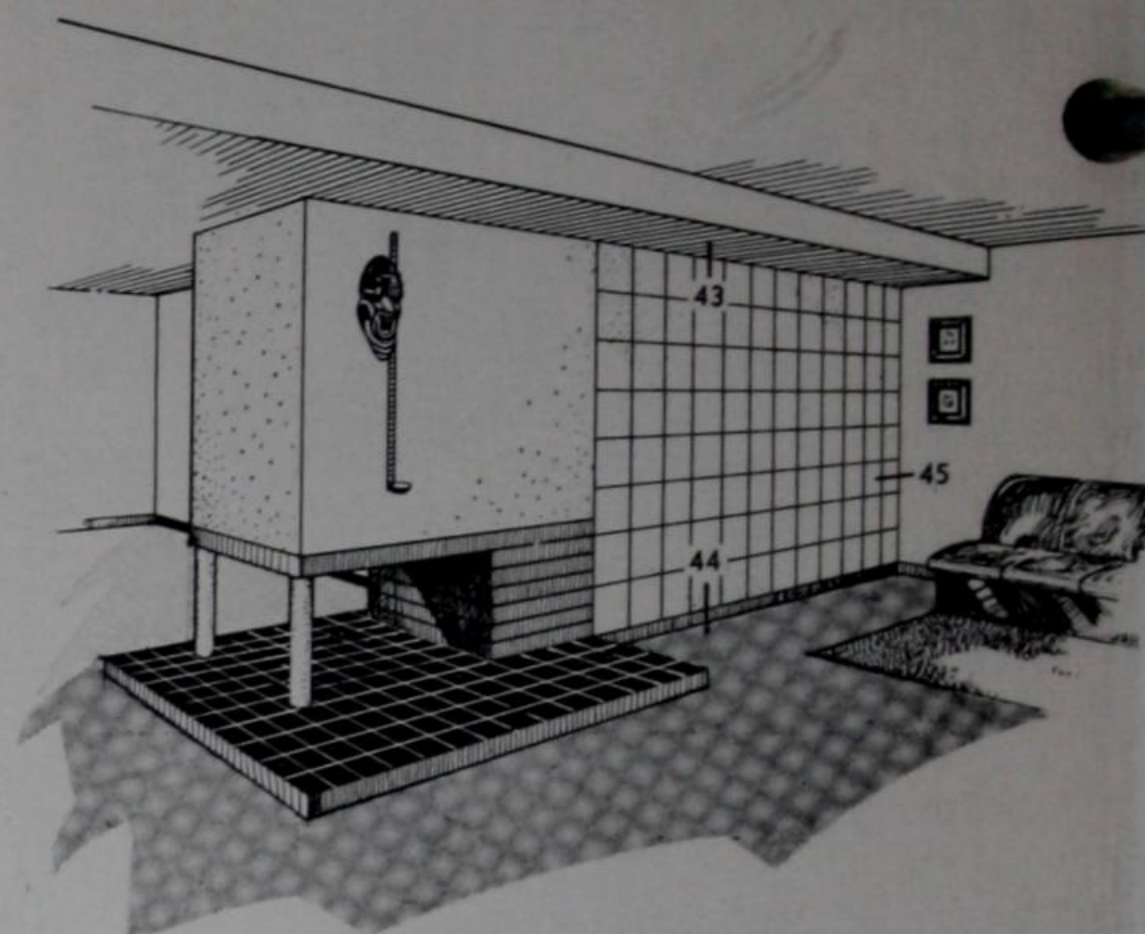
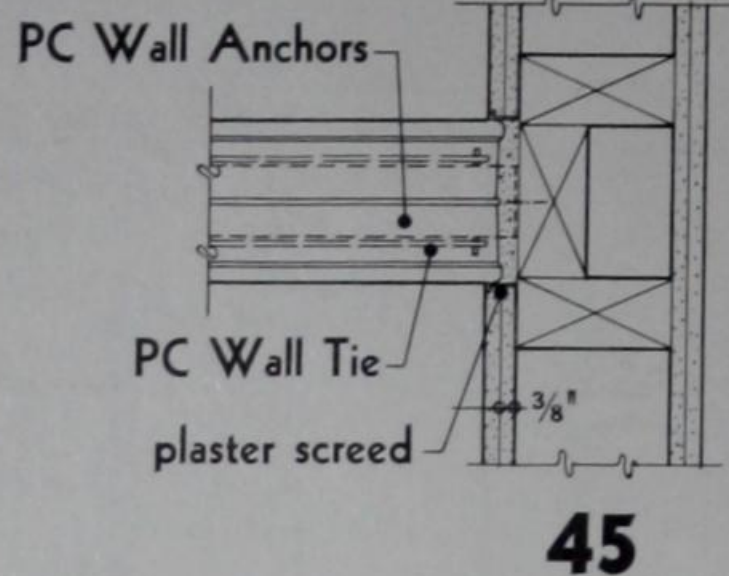
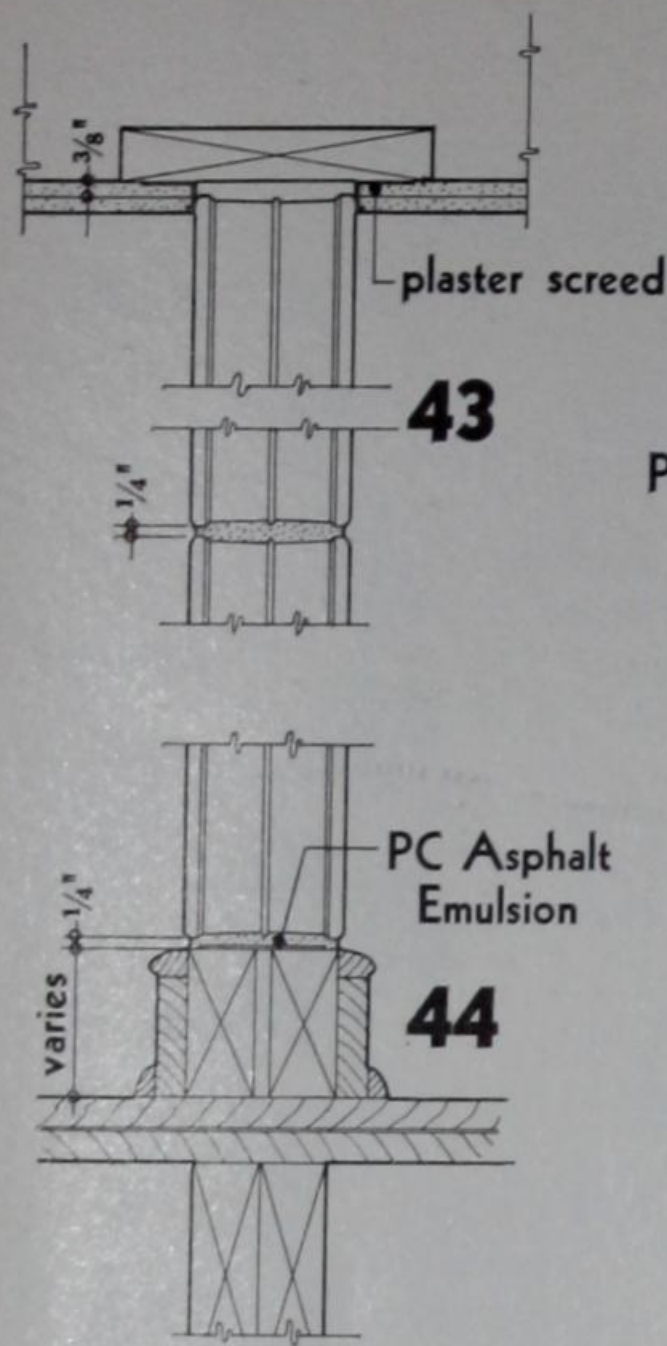


## LIVING ROOM, DINING ROOM PARTITION



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## CURVED PANEL INSTALLATION REQUIREMENTS

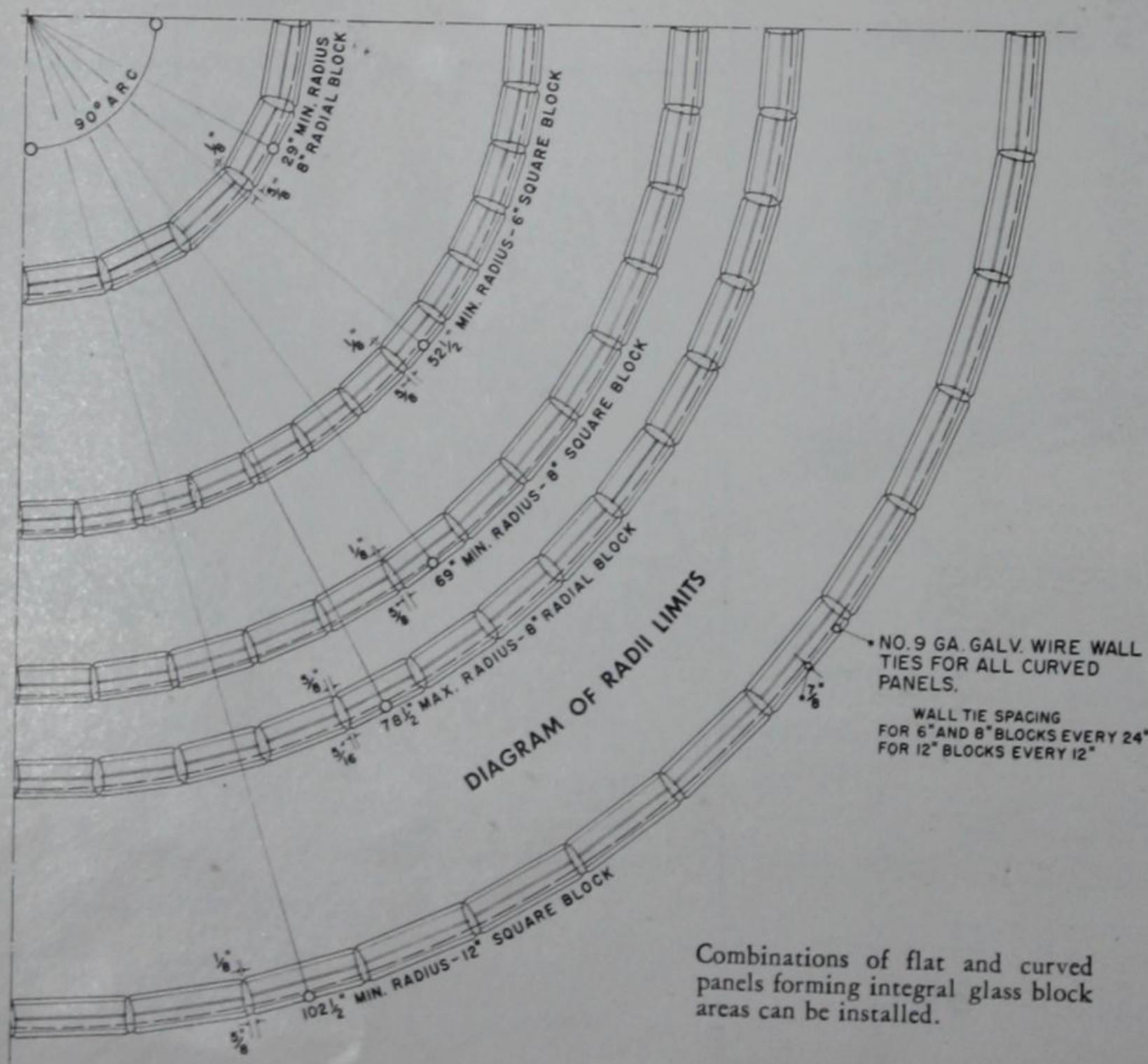


TABLE OF RADII LIMITS FOR CURVED PANELS

Outside Radius Inches	Number of Block in 90° Circular Arc	Joint Thickness in Inches		Remarks
		Inside	Outside	
6" SQUARE BLOCK				
52 1/2	13	1/8	5/8	Minimum
56 1/4	14	1/8	5/8	
56 3/4	14	1/8	5/8	
60	15	1/8	5/8	
61	15	1/8	5/8	
63 3/4	16	1/8	5/8	
65	16	1/4	5/8	
67 1/2	17	1/8	1/2	
69	17	1/4	5/8	
71 1/4	18	1/4	5/8	
73	18	5/16	7/16	

No Maximum Limitations.

8" SQUARE BLOCK

Outside Radius Inches	Number of Block in 90° Circular Arc	Joint Thickness in Inches	Remarks
69	13	1/8	Minimum
74	14	1/8	
74 3/4	14	1/8	
79	15	1/8	
80	15	1/4	
84	16	1/4	
85 1/4	16	1/4	

No Maximum Limitations.

8" RADIAL BLOCK

Outside Radius Inches	Number of Block in 90° Circular Arc	Joint Thickness in Inches	Remarks
29	5	1/8	Minimum
34	6	1/8	
34 3/4	6	1/8	
39	7	1/8	
40 3/4	7	1/8	
44	8	1/8	
46 1/2	8	1/8	
49 1/2	9	1/8	
51 3/4	9	1/8	
55	10	1/4	
57 1/4	10	1/4	Use Square Block for larger radii
60 1/2	11	1/4	
62 1/2	11	1/4	
66	12	1/4	
67 3/4	12	1/4	
71 1/2	13	1/4	
73 1/4	13	1/4	
76 3/4	14	1/4	
78 1/2	14	1/4	

12" SQUARE BLOCK

Outside Radius Inches	Number of Block in 90° Circular Arc	Joint Thickness in Inches	Remarks
102 1/2	13	1/8	Minimum

No Maximum Limitations.

NOTE: Radii given to closest quarter inch; joint thickness to closest sixteenth inch.

Combinations of flat and curved panels forming integral glass block areas can be installed.



# PC Glass Blocks

## CLOSED SPECIFICATIONS

**GENERAL CONDITIONS:** The "General Conditions" of the contract are a part of these specifications.

**SCOPE OF THE WORK:** This contractor shall furnish all labor and materials to install all glass blocks where shown on the drawings or specified hereinunder. This shall include the furnishing and installation of all expansion joint strips, felts, wall ties, wall anchors, calking, asphalt emulsion, and other labor and materials necessary for a complete installation. This contract does not include the preparation of the structure to receive the glass block panels, except as hereinafter specified.

**MATERIALS:** Glass Blocks . . . shall be hollow, partially evacuated, clear, colorless glass units as manufactured by the Pittsburgh Corning Corporation. Units shall be "all glass," formed of two halves fused together at a high temperature. Edges shall be so formed as to provide a "key-lock" mortar joint. All blocks shall be coated on the edges with a grit-bearing, water-and-alkaline-resistant plastic material.

**Patterns — Sizes — Shapes . . .** shall be as shown on the drawings or as specified hereinunder:  
(Indicate PC patterns, sizes and shapes, and locations)

**Expansion Joint Materials . . .** where shown or required, shall be PC Expansion Strips as furnished by Pittsburgh Corning Corporation.

**Asphalt Emulsion . . .** where shown or required, shall be PC Asphalt Emulsion as furnished by Pittsburgh Corning Corporation.

**Wall Ties . . .** shall be PC Wall Ties of steel double wire mesh formed of two parallel wires (No. 9 gage) 2" on centers with electrically welded cross wires (No. 14 gage) at regular intervals, and shall be galvanized. Wall ties shall be installed in horizontal mortar joints of all glass block panels as follows:

- For  $5\frac{3}{4}$ " size blocks — Every four courses.
- For  $7\frac{3}{4}$ " size blocks — Every three courses.
- For  $11\frac{3}{4}$ " size blocks — Every course.

Wall ties shall run continuously with ends lapped not less than 6 in. and shall run from end to end of panel. Wall ties shall not bridge expansion joints.

**Wall Anchors . . .** where shown on drawings shall be PC Wall Anchors as furnished by the Pittsburgh Corning Corporation and shall be No. 20 gage perforated steel strips 24 in. long by  $1\frac{3}{4}$  in. wide galvanized after perforating. All wall anchors must be crimped within expansion joints, and shall generally be placed 24 in. apart, occurring in the same joint as wall ties and must be completely embedded in the mortar joint of the glass block panels.

**Mortar . . .** shall be one (1) part Portland Cement, one (1) part lime, and four (4) to six (6) parts sand all measured by dry volumes, and *integral type waterproofer*, mixed to a consistency as stiff as will permit good working and shall be drier than for ordinary clay brickwork. For interior panels the waterproofer may be omitted. Admixtures in the form of setting accelerators and anti-freeze compounds shall not be used.

NOTE: At the discretion of the architect or engineer, a mortar prepared from masonry cement of low volume change, incorporating metallic stearate type waterproofer, and mixed in accordance with manufacturer's recommendation may be specified as an alternate.

**Cement . . .** shall be Type I conforming to the Standard Specifications for Portland Cement (A.S.T.M. Designation: C150-46).

**Lime . . .** shall be a high-calcium type\* hydrated lime or masons' hydrate conforming to the Standard Specifications for Normal Finishing Hydrated Lime (A.S.T.M. Designation: C6-46T); or a well-slaked quicklime putty conforming to the Standard Specifications for quicklime for Structural Purposes (A.S.T.M. Designation: C5-26). Hydrated lime shall be soaked at least two (2) hours, and quicklime shall be slaked not less than forty-eight (48) hours and screened prior to use in mortar. Where lime in the form of putty is used, the amount specified shall be interpreted as the actual volume of putty.

\*NOTE: Hydrated lime of the magnesia or dolomite type may be used provided that not less than 92% of all active ingredients are completely hydrated.

**Sand . . .** shall conform with Standard Specifications for Aggregate for Masonry Mortar, Intermediate Grading (A.S.T.M. C144-44), but shall contain particles of such size that not more than twelve (12) per cent by weight shall pass a No. 100 mesh sieve, and one hundred (100) per cent shall pass through a No. 8 mesh sieve, as defined therein.

**Waterproofers . . .** shall be Pittsburgh Plate Glass Co. type NV-3389 (metallic stearate type.) It shall be added to the mortar at the time of mixing and in the proportion recommended by the manufacturer, except where a waterproof Portland Cement or prepared masonry mortar is used. In the latter cases, no waterproofer shall be added at the time of mixing.

**Calking . . .** mastic calking compounds as approved by the architect shall be applied evenly and to the full depth of recess provided at both interior and exterior perimeters of all glass block panels.

**FLASHINGS:** Unless otherwise specified, contractor shall furnish and install in locations shown or where required, flashings as are necessary to provide a complete installation.

**INSTALLATION:** Sills shall be heavily coated with asphalt emulsion which shall be allowed to dry for at least two hours before mortar is placed. Expansion joint strips shall be adhered to the jambs and head with asphalt emulsion, and shall run continuously in the expansion space, and must rest directly on the sill.

All mortar joints must be completely filled with mortar and *shall not be furrowed*. Mortar must not bridge across expansion joints. Blocks shall be laid up plumb, true to line, and with one-quarter ( $\frac{1}{4}$ ) in.\* visible width mortar joints. While mortar is still plastic and before final set, the joints shall be compressed to a depth necessary to expose the corners of the blocks as sharp, clean lines, and joints shall immediately be tooled slightly concave and smooth. The number of courses of glass blocks laid in successive lifts shall be limited to prevent compaction of joints.

\*Unless otherwise specified.

**CLEANING:** While mortar is still plastic and before final set, this contractor shall clean off all mortar and foreign material from the glass block surfaces. Final cleaning shall be done by others, after mortar has reached its final set.

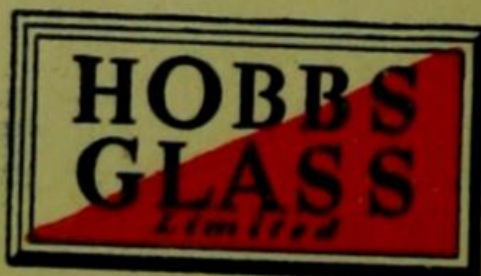


# PC Glass Blocks

Manufactured by **PITTSBURGH CORNING CORPORATION**, 632 Duquesne Way, Pittsburgh 22, Pa.

## PC Glass Blocks

ARE SOLD IN CANADA BY



BRANCHES COAST TO COAST



*NOW! Available in Canada*

# PC VUE Glass Blocks

(A MODULAR PRODUCT)

*Hobbs Glass Limited presents  
Transparent glass blocks: gen-  
eral vision combined with effec-  
tive insulation.*

PC VUE Glass Blocks had already won wide acceptance when war halted their production. They were developed by Pittsburgh Corning Corporation at the request of architects, engineers and designers who wanted a "glass block you can see through."

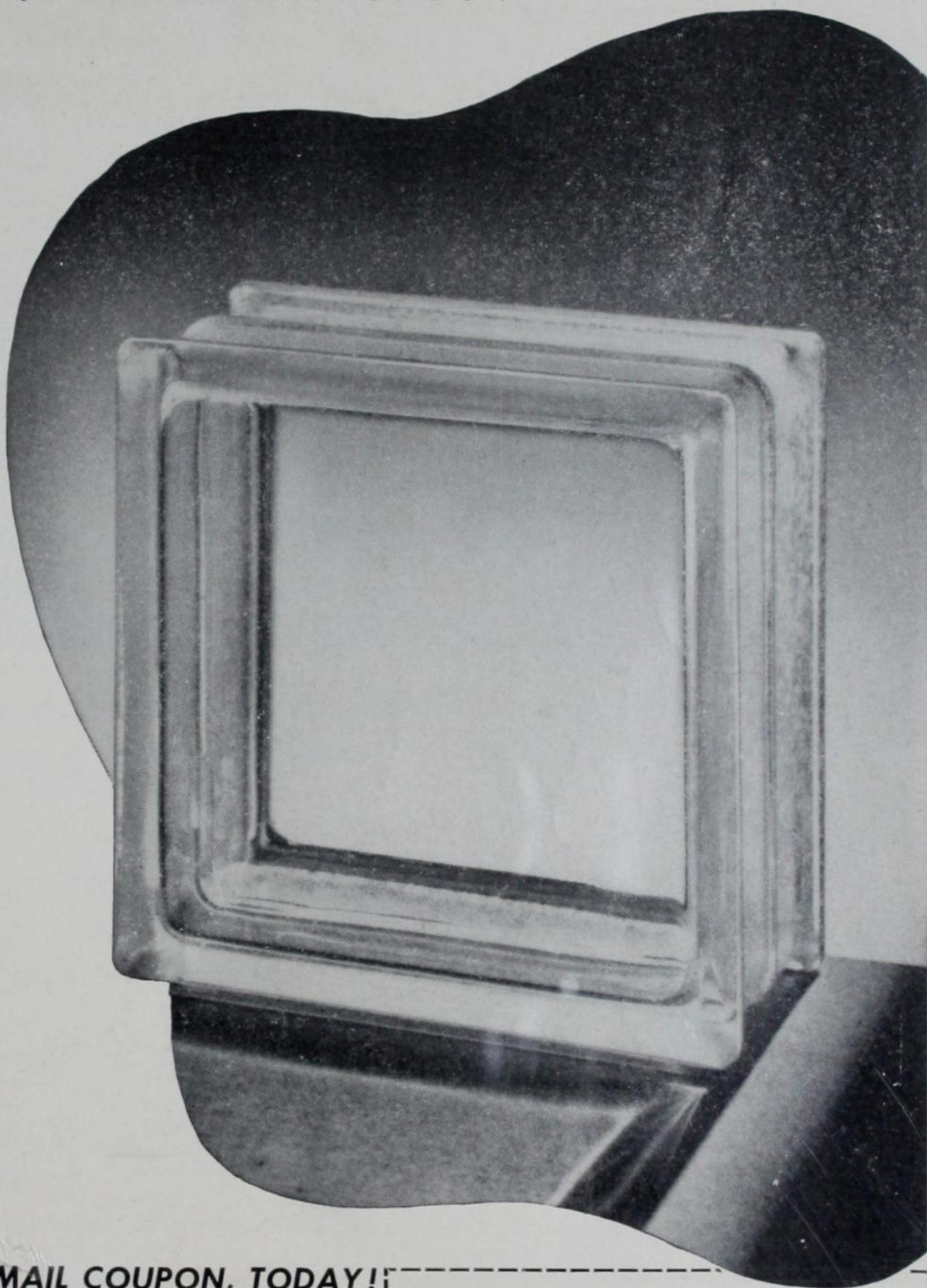
The PC VUE Glass Block is made of transparent, fire polished glass, with smooth surfaces inside and out. It admits plenty of clear daylight, allows sufficient general vision of what goes on outside to prevent the "shut-in" feeling. PC VUE Glass Blocks can be installed alone in large lighting panels or can be used in combination with regular block patterns, to provide vision areas of desired size and location.

Like the other PC Glass Blocks, the VUE Block contains a partial vacuum, a dead air space that gives it twice the insulating value of ordinary single-light glass. So heat transmission is retarded—even through large opening panels—easing the load on air conditioning equipment and reducing heating costs.

When you are planning new buildings or remodeling projects, be sure you have all the latest information on PC VUE Glass Blocks. Just send in the coupon and we'll mail you free copies of new booklets on PC Glass Blocks.

## PC GLASS BLOCKS

...the mark of a modern building



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**Branches  
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Hobbs Glass Limited, Dept. 10-G,  
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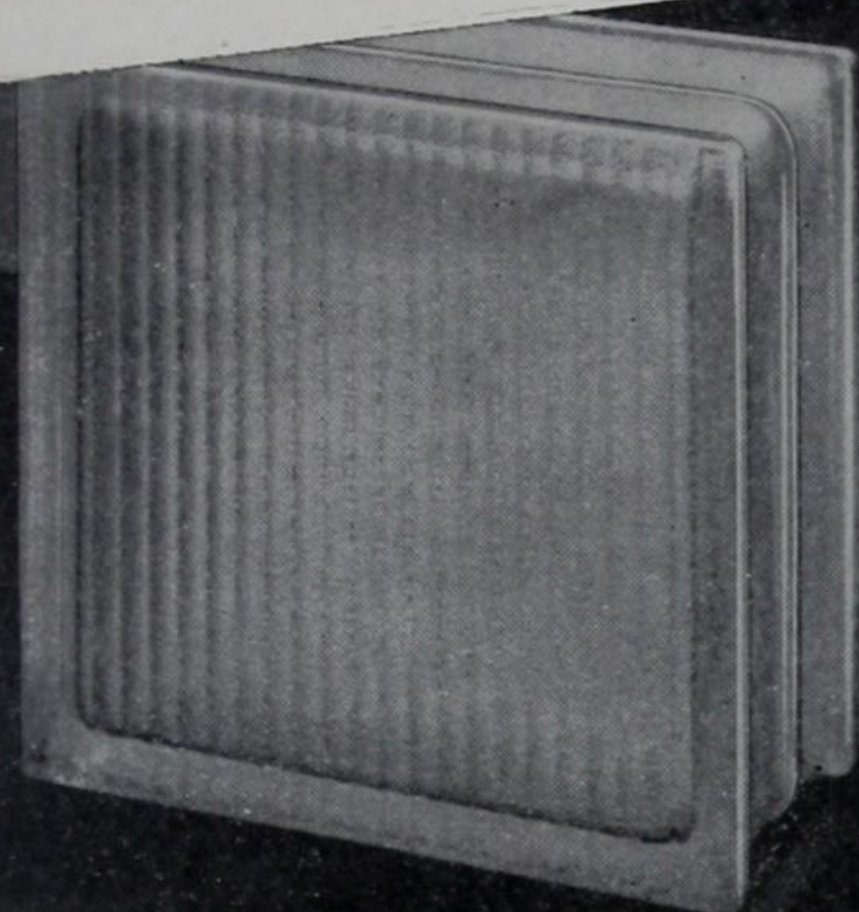
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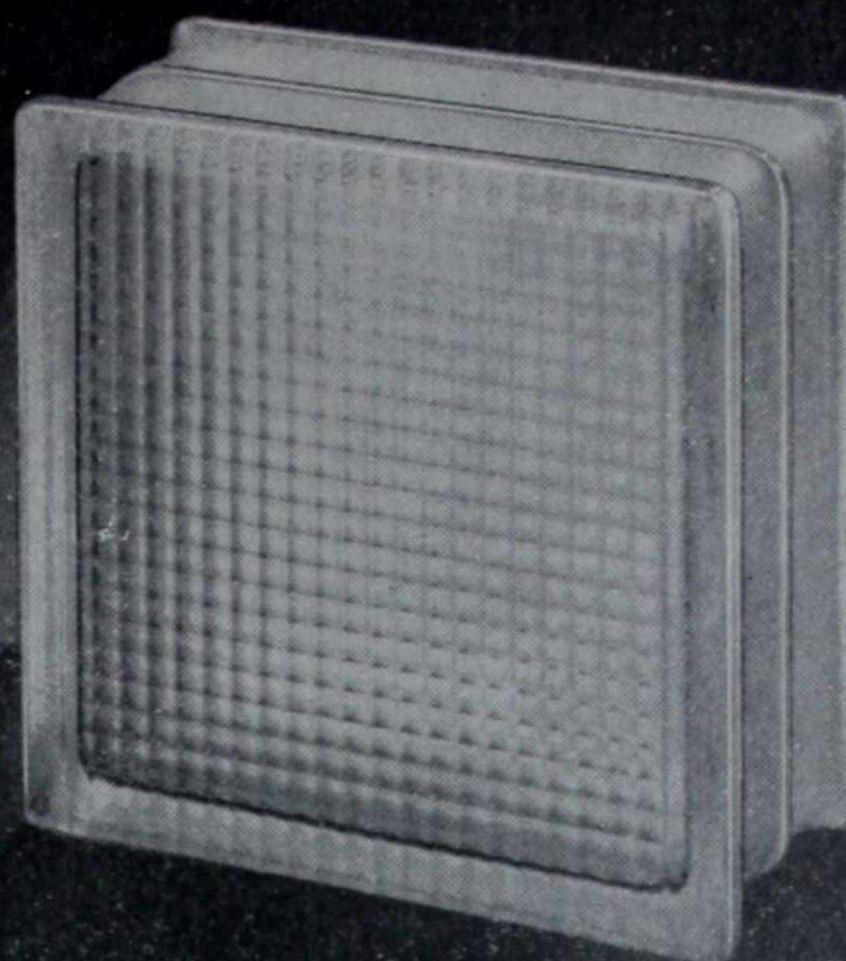


**AGAIN AVAILABLE**

*in Canada!*



BRISTOL  
LX-75



DRUID  
LX-75

**PC Glass Blocks, with a fibrous glass screen, which  
diffuse daylight, reduce solar heat transmission.**

A MODULAR PRODUCT

● Before the war, PC LX-75 Glass Blocks were in great demand by architects everywhere. Now for the first time these glass blocks are again available to Canadian architects through Hobbs Glass Limited.

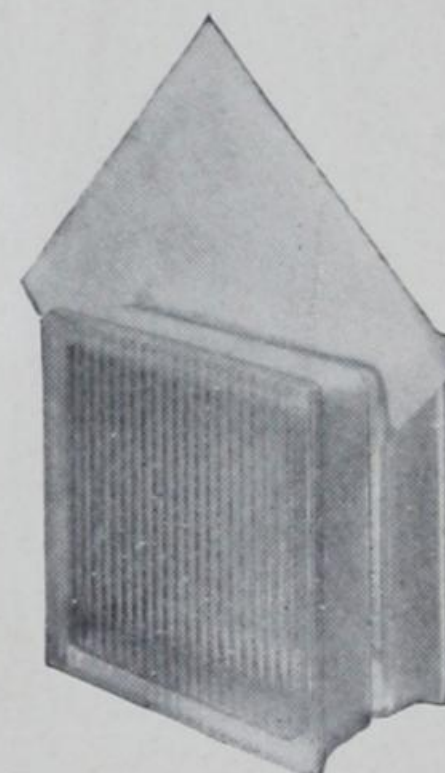
Panels of these LX-75 Glass Blocks distribute well-diffused daylight evenly over large areas. And even when direct sunlight strikes them, the fibrous glass screen that is sealed in the blocks helps them to diffuse it so that objectionable glare is eliminated.

These blocks also decrease the transmission of solar heat through the large lighting areas in which they may be used. Solar heat gain is only 35% of that of single

glazed sash. The fibrous glass insert in the blocks gives them extra insulation value, extra resistance to the passage of heat, so that fuel costs are reduced, and the load on air-conditioning equipment eased.

PC LX-75 Glass Blocks give your clients all the other advantages found in the regular PC Glass Block patterns: Good looks, privacy, easy cleaning, prevention of dirt-infiltration, reduction of outside noises.

Contact your nearest Hobbs branch or send coupon to Hobbs Glass Limited, London, Canada for complete information about PC LX-75 Glass Blocks.



A screen is inserted and permanently sealed between the halves of the block. The screen, composed of glass fibers pressed into a thin sheet, effectively diffuses the light. It causes a marked reduction of brightness and solar heat transmission.

**PC GLASS BLOCKS . . . the mark of a modern building**

**Branches coast to coast**



Hobbs Glass Limited,  
Dept. 10-H, London, Canada  
Please send me free descriptive literature on  
PC LX-75 Glass Blocks.

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*This advertisement appears in R. A. I. Journal of Canada, August, 1948*



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PC

*Glass Blocks*

29 Blocks high



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# PC Glass Blocks

## OFFER MANY ADVANTAGES TO INDUSTRY

... because they transmit daylight through an insulated wall

Each PC Glass Block contains a sealed-in dead-air space that is an effective heat retardant. As a result, a panel of PC Glass Blocks contains a multitude of small insulating units—each block and the whole panel having a very low coefficient of heat transfer. The insulation of daylighting areas is important to industry. It eliminates much of the wastefulness of ordinary windows, and has a marked effect on manufacturing efficiencies in many plants.

**BETTER TEMPERATURE CONTROL**—Whether you want to keep your rooms hot or cold, PC Glass Blocks can help you. They have less than half the heat loss of ordinary windows, with insulation comparable to the best double-glazing. This results in more constant room temperatures, more freedom from the influence of outdoor temperatures, summer and winter.

**BETTER HUMIDITY CONTROL**—With temperatures held more constant and with less moisture taken from the air by condensation on glass areas, the problem of humidity control is simplified. Where processes are adversely affected by humidity fluctuations, this factor is very important.

**LESS SURFACE CONDENSATION**—Where surface condensation on window areas is a problem, the use of glass blocks often proves advantageous. For moisture does not condense on the warm side of a PC Glass Block panel except under unusually severe temperature and humidity conditions.

**INCREASED USABLE FLOOR AREA**—Areas near ordinary windows often are not usable when precision work is being done, because frequent changes in outdoor temperatures so greatly affect room temperatures. PC Glass Blocks not only insulate light-transmitting areas against outdoor temperature changes, but also eliminate drafts of cold air. Thus they frequently make the outer floor areas more comfortable for employees and more usable for operation of precision equipment.

**AIDS AIR CONDITIONING**—The three chief aims of air conditioning—temperature control, humidity control and cleansing of air—are all aided by the use of PC Glass Blocks. The insulation afforded by glass block panels saves money for operators of air-conditioning systems. Heat loss is less in winter—heat gain is less in summer. Humidity conditions are much less likely to be upset by condensation. Solar heat transmission and radiation are reduced. Dirt can't filter in—for each panel is a tightly sealed unit. The result is that less load is thrown on the equipment. It can do a better conditioning job, and savings in size of air-conditioning equipment are possible.

**MORE DAYLIGHT**—Better lighting has long proved itself an important factor in improving production efficiency. Better lighting adds to safety and provides eye-comfort. With PC Glass Blocks you get an abundance of diffused daylight and with proper selection of pattern achieve efficient control of the transmitted light. And with far less solar heat transmission than with equal areas of single-glazed sash.

**DIRT INFILTRATION ELIMINATED**—In plants where foods, finely machined parts, or delicate fabrics are produced, PC Glass Blocks are an ideal source of daylight. For harmful dirt and grit can't filter through panels of glass blocks. This is especially important in regions where the atmosphere is smoky or dusty. Glass blocks keep out gases that may be offensive or may cause deterioration of equipment.

**EASIER TO CLEAN**—A whole panel of glass blocks is cleaned as one unit—not a small panel at a time. No muntins to clean—just a simple sweep of one smooth glass-and-cement area. Many maintenance men have found that satisfactory cleaning can be done simply by one man with a hose, and a long-handled brush. The translucent effect of glass block panels keeps them looking clean long after ordinary clear glass looks spotty or streaked from dirt particles.

**LOWER MAINTENANCE COSTS**—With PC Glass Block panels for light-giving wall areas or partitions, maintenance costs are almost non-existent. No unsightly and dangerous corroded or rotted sash need be replaced. Once installed, the panel of glass and strong clean mortar joints practically takes care of itself.

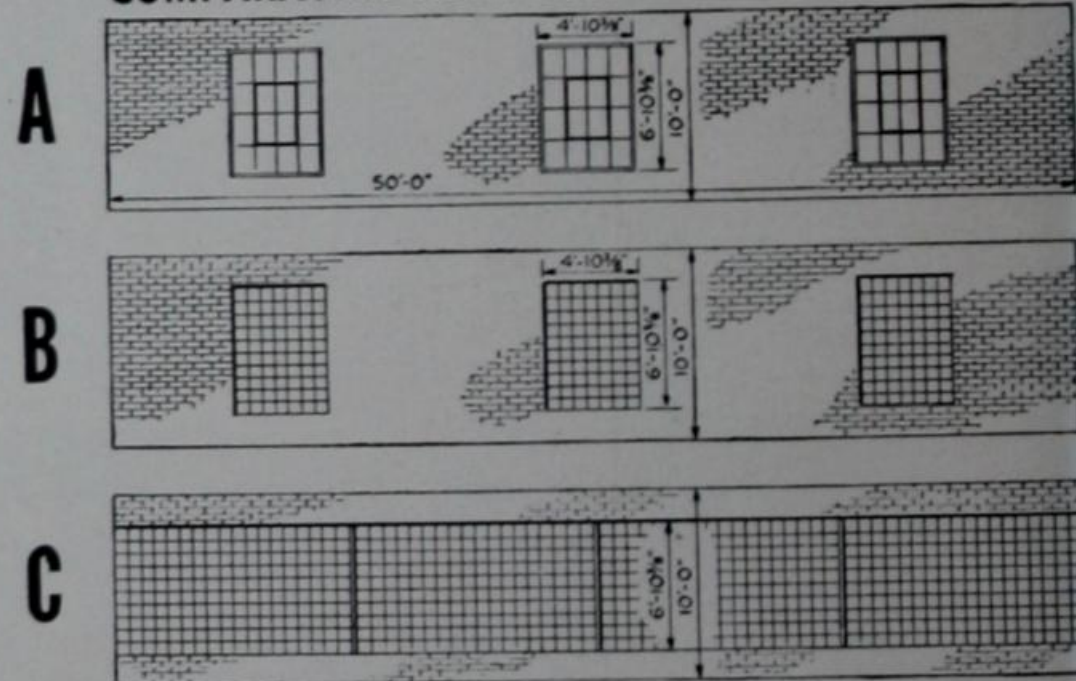
PC Glass Blocks make a permanent type of panel. Glass blocks are not easily marred or broken. Should replacement of an individual block be required, it can be done easily by a regular mason.

**PRIVACY**—Translucent glass blocks admit well-diffused streams of light—but they guard privacy. Unsightly views can be eliminated. Distracting views are shut off. There is greater concentration of vision on the things you want seen. Limited vision of general outdoor conditions can be had if desired, by inserting PC Vue Blocks in the panel.

**EFFECTIVE SOUND INSULATION**—Glass Block panels substantially reduce distracting and undesirable noise. Even in factory surroundings, offices can have quiet and privacy. And there's less chance of factory noises causing complaints from occupants of adjacent buildings.

**EASY INSTALLATION**—A regular mason will have no trouble laying panels of PC Glass Blocks. And here's something every mason will appreciate. PC Glass Block edge construction forms a "key-lock" mortar joint, providing a full bed of mortar, yet permitting a visible joint of only about 1/4 in., resulting in a trim panel that is pleasing to the eye. And this "key-lock" joint is easier to handle in laying.

### COMPARATIVE HEAT LOSS IN SAMPLE WALL



8" brick wall (area 50' x 10')—3/4" plaster on furred metal lath. Temperature inside 70°F.—outside 0°F. Wind at 15 m.p.h.

**A** With 100 sq. ft. of single-glazed steel sash in three openings—  
Heat losses—  
Through brick ..... 8960 B.T.U. per hr  
Through sash ..... 7910 B.T.U. per hr  
Through total wall area ..... 16870 B.T.U. per hr

**B** With 100 sq. ft. of 8" PC Glass Blocks in three panels—  
Heat losses—  
Through brick ..... 8960 B.T.U. per hr  
Through glass blocks ..... 3430 B.T.U. per hr  
Through total wall area ..... 12390 B.T.U. per hr  
Heat loss through light-transmitting area less than half, with a reduction of 26% of total heat loss through the entire wall.

**C** With 340 sq. ft. of 8" PC Glass Blocks—  
Heat losses—  
Through brick ..... 3580 B.T.U. per hr  
Through glass blocks ..... 11660 B.T.U. per hr  
Through total wall area ..... 15240 B.T.U. per hr  
Heat loss 90% of panel A, but with twice as much light.

NO OTHER SINGLE BUILDING MATERIAL OFFERS ALL THESE IMPORTANT ADVANTAGES

PITTSBURGH CORNING CORPORATION



# PC Glass Blocks

## HELP INDUSTRY CUT COSTS AND IMPROVE PLANT EFFICIENCY

PC Glass Blocks have won wide use in industry for both new construction and for sash replacement. A review of the advantages shown on the preceding page will suggest to both maintenance and operating men many places where their use will prove beneficial. And a review of a few types of plants will show how these advantages are translated into better operation and lower costs.



**CHEMICAL**—It pays here to avoid window structures that are highly susceptible to acid atmosphere. Wood and steel sash require frequent and costly maintenance—glass blocks are little affected by acid atmosphere and actually lower maintenance costs under such conditions. Because temperature control is important to uniformity of production—and because dirt infiltration must be at a minimum to assure purity of chemicals, glass blocks are widely used for chemical plants.

**FOOD**—Purity of the product, government inspection and public good will all demand that every part of the plant be spic and span. Not only are PC Glass Block panels easy to clean, but their appearance gives the plant a bright, clean look. Glass block panels do not permit infiltration of dust, spores, or other contaminating elements.

**POWER PLANTS**—By using glass blocks in power plants, plenty of daylight is provided—with less heat loss, and with complete privacy. And the sound insulation provided by the panels of blocks keeps power house noises from disturbing occupants of adjacent buildings.

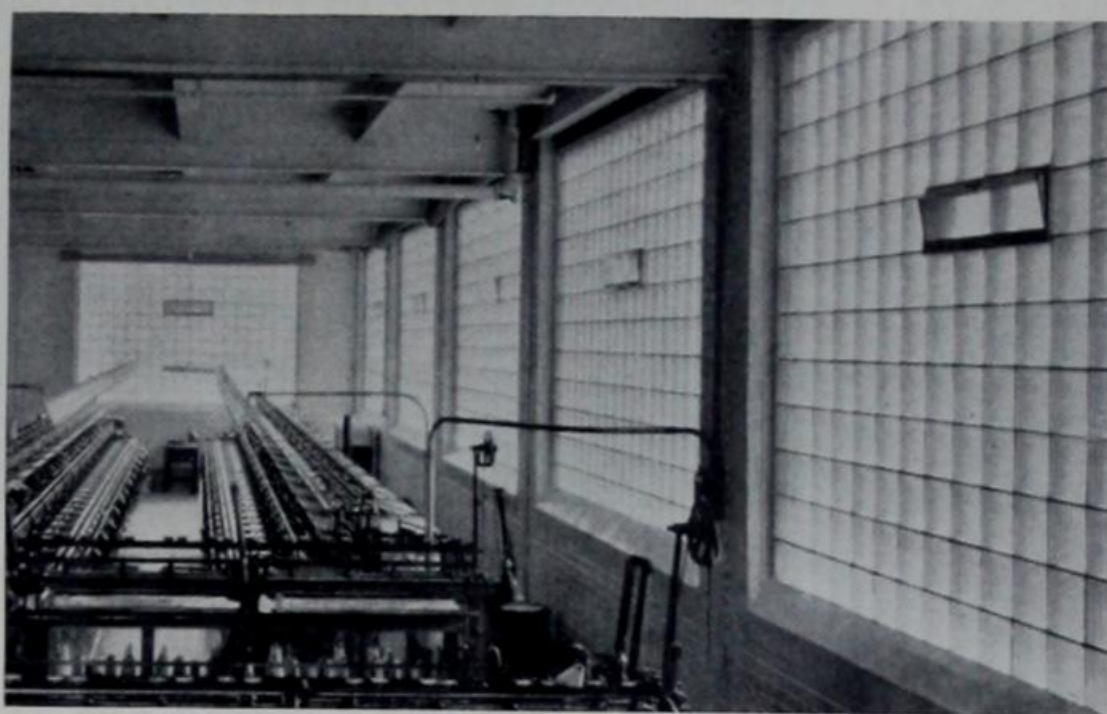
### RESEARCH FACILITIES

For many years groups of men in the factories and the laboratories of the Pittsburgh Corning Corporation, the Corning Glass Works and the Pittsburgh Plate Glass Company have been painstakingly studying all aspects of glass block design, fabrication and performance. Where it has seemed necessary or desirable the assistance of independent investigators and testing laboratories has been utilized. Among these have been the following: The Mellon Institute of Industrial Research, The Carnegie Institute of Technology, The University of Minnesota, Pittsburgh Testing Laboratories, Electrical Testing Laboratories, Riverbank Laboratories.

### ARCHITECTURAL—ENGINEERING SERVICE

The Pittsburgh Corning Corporation maintains an able staff of field consultants and glass experts. Architects and engineers everywhere are invited to take full advantage of the cooperation and advice these men can extend in connection with problems involving these products. Complete engineering and specification service is provided on all Pittsburgh Corning Products. Communications

**PAPER**—Extremely high temperatures are necessary for paper drying, and consequent high humidities make paper mills drip with moisture. This moisture is acid and makes maintenance of ordinary sash both troublesome and costly. Light-transmitting areas should be insulated and sealed for maximum efficiency. So it can be readily seen why the use of glass blocks is such a "natural" here.



**TEXTILE**—The need for uniform temperature and humidity makes glass blocks ideal here. Hosiery mills, for example, operate finely-adjusted machinery, so they can't take chances with temperature changes. Throwing rooms require high humidity that readily destroys ordinary sash. And in dye houses, where high acid-content atmospheres prevail, glass blocks help cut maintenance costs.

**MACHINE SHOPS**—Where precision is important, temperature variations can't be allowed. PC Glass Blocks permit use of precision machinery nearer outside walls than would be possible with the greater heat loss of ordinary windows.

**INDUSTRIAL PLANTS, ORDNANCE PLANTS, ARSENALS**—PC Glass Block construction is ideal for a wide variety of plants. There's complete privacy and good lighting for precision work. And remember this—PC Glass Blocks are available *for immediate use*. There's no need to wait for critical materials. And the blocks can be installed by regular masons.

**OFFICES, CAFETERIAS** and many other locations can profit from the cleanliness and privacy provided by PC Glass Block panels.

addressed to Pittsburgh Corning Corp., 632 Duquesne Way, Pittsburgh 22, Pa., or to any branch of the Pittsburgh Plate Glass Co., will receive prompt attention.

### DISTRIBUTION FACILITIES

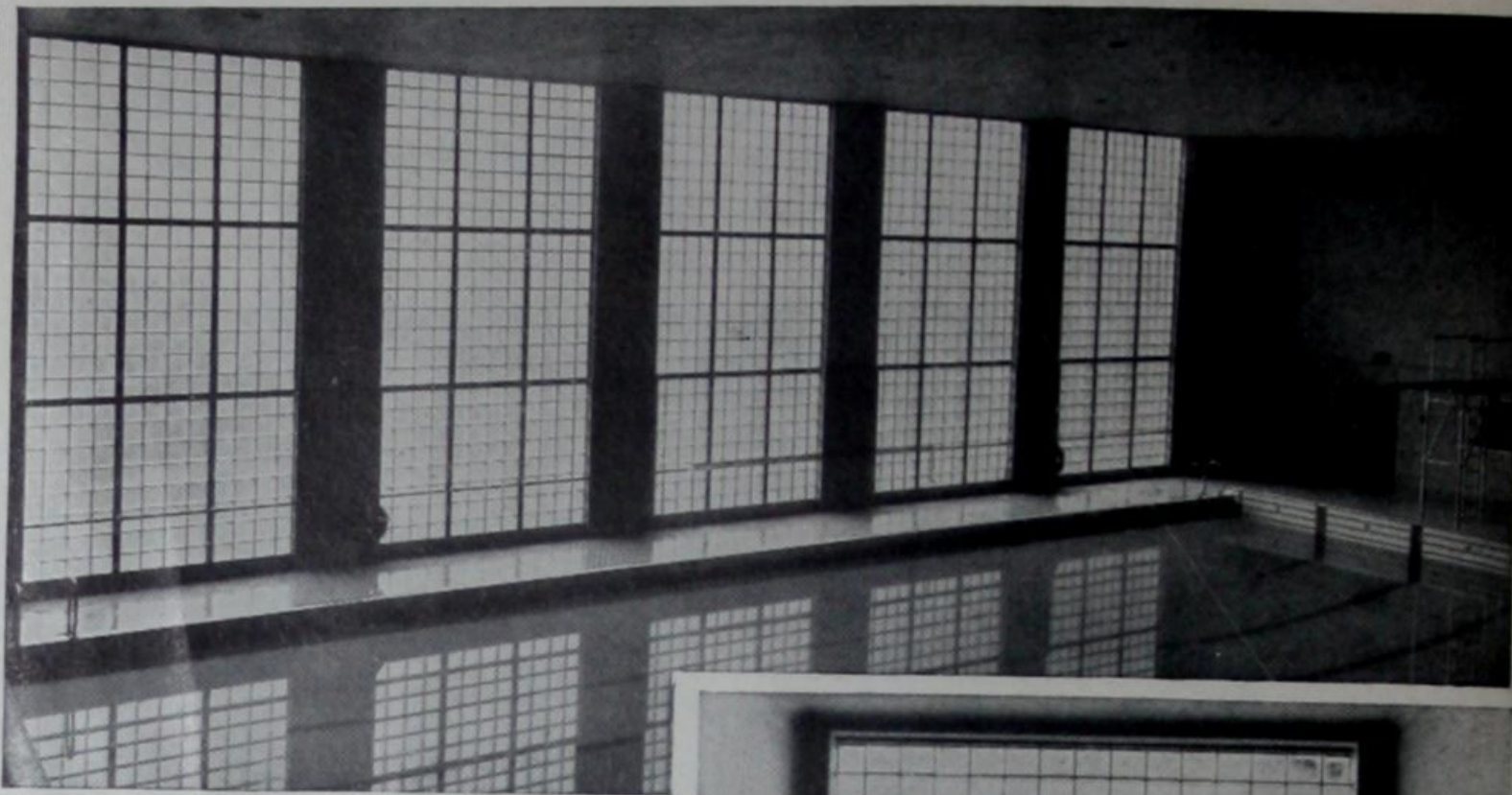
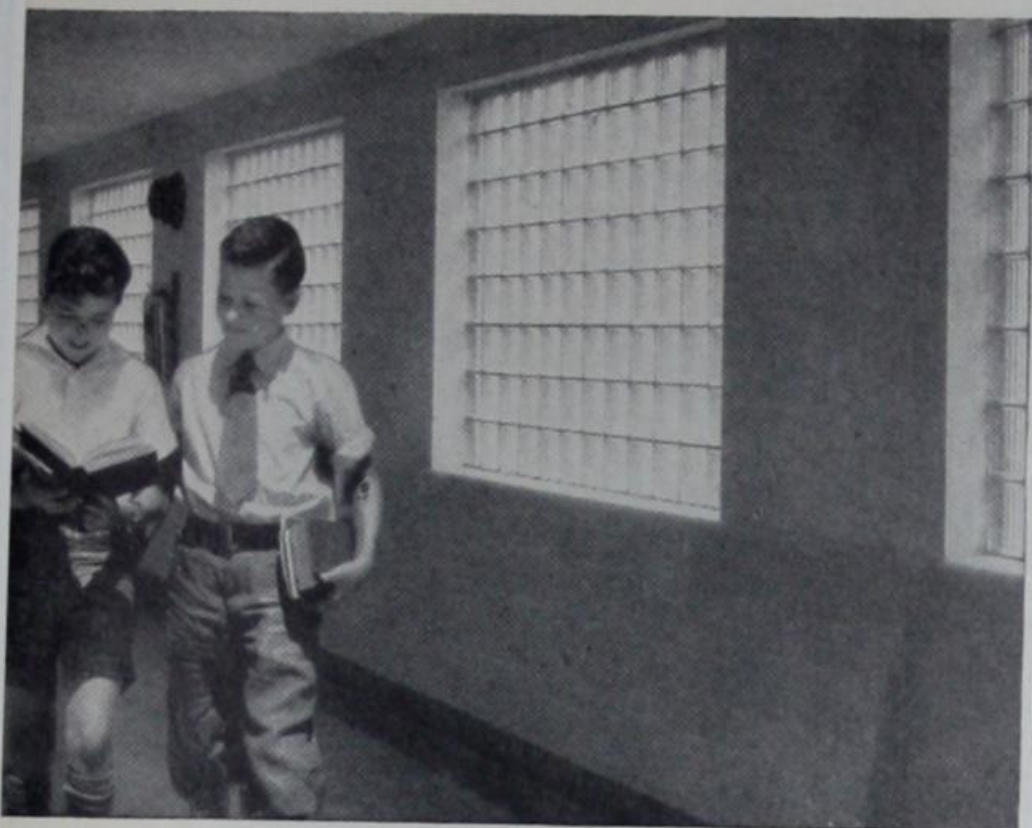
PC Glass Blocks are distributed through the warehouses of the Pittsburgh Plate Glass Company, the branches of W. P. Fuller & Co. on the Pacific Coast, and through selected dealers. Pittsburgh warehouses are located in the principal trading centers throughout the country, and form a complete network of fully-stocked headquarters, with unequalled facilities for rendering prompt and efficient service to the building trades, no matter where located. For a complete list of these chief distribution centers, see the list on page 20 of this section.

### BUILDING CODE AUTHORITIES APPROVE PC GLASS BLOCKS

Building Code Authorities throughout the country have accepted and approved the use of PC Glass Blocks as a building material of adequate strength for non-load-bearing construction when installed according to the manufacturer's recommendation.

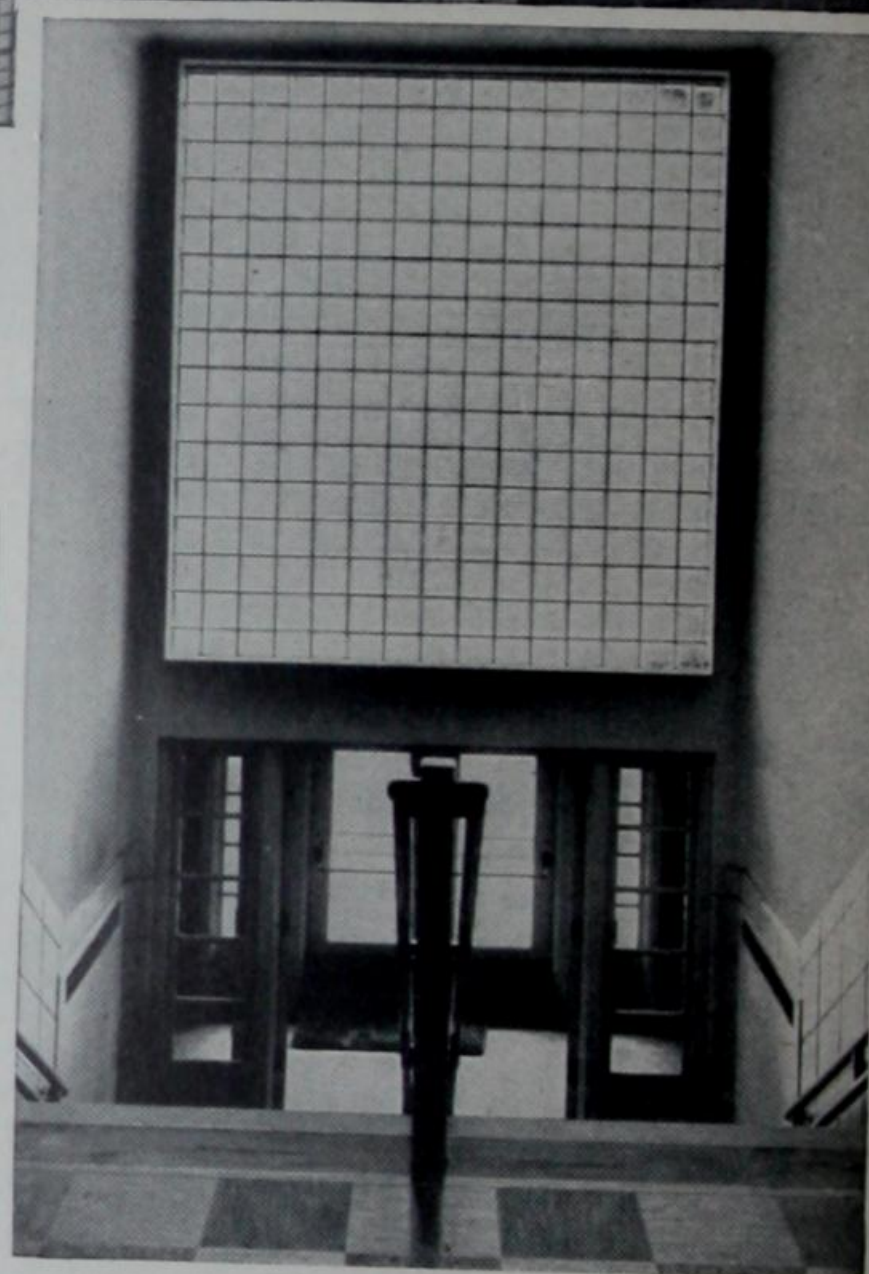
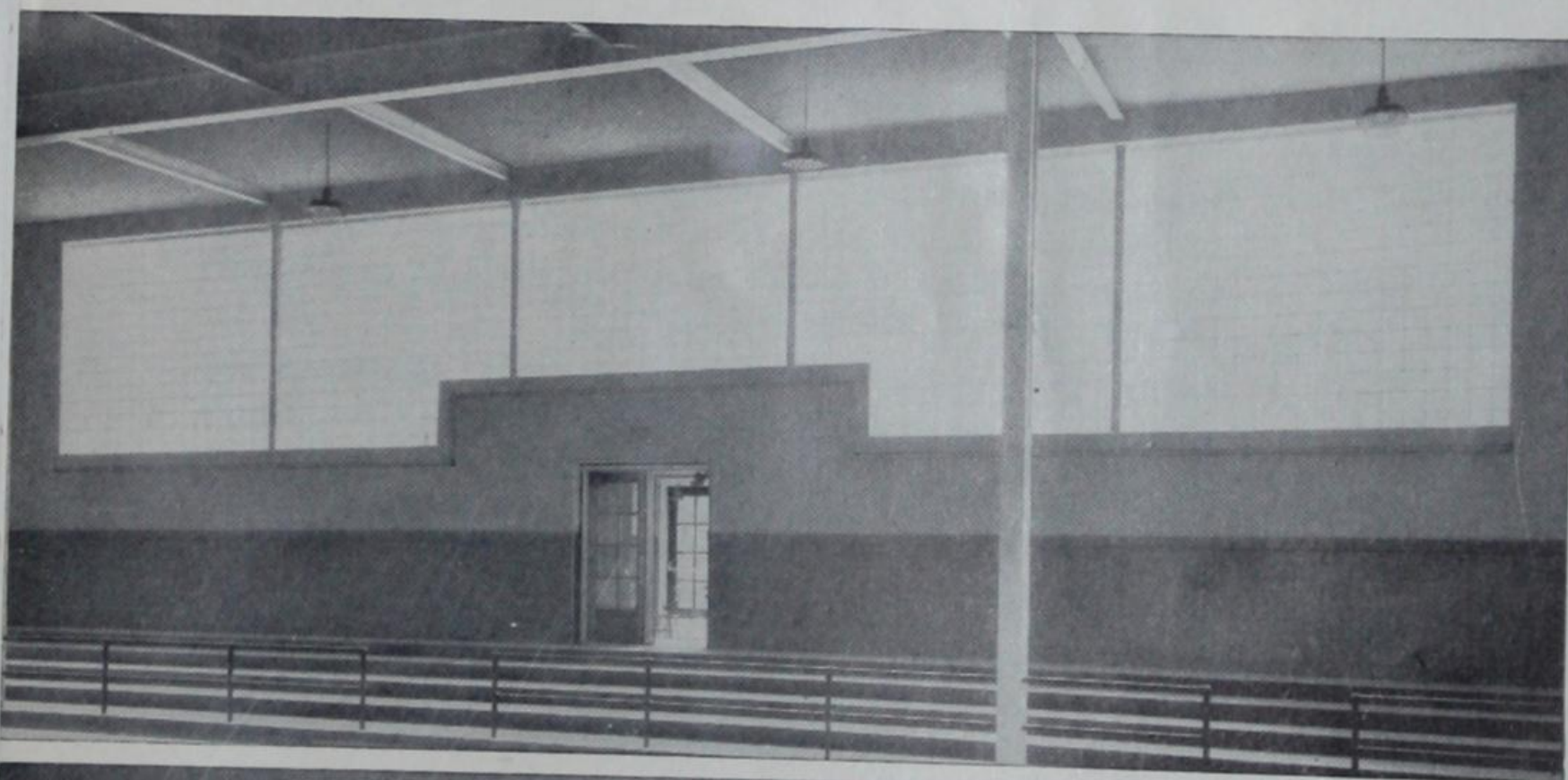


# PC Glass Blocks FOR BRIGHT, CHEERFUL SCHOOLS



(Left, above) Bright corridors are assured when PC Glass Blocks are used. Classrooms leading off a corridor like this are better-lighted, also, because they can "borrow" daylight from the corridor. And in any school building use, PC Glass Blocks add greatly to the architectural beauty of the building, improving both exterior and interior appearance. Architect: Charles E. Firestone.

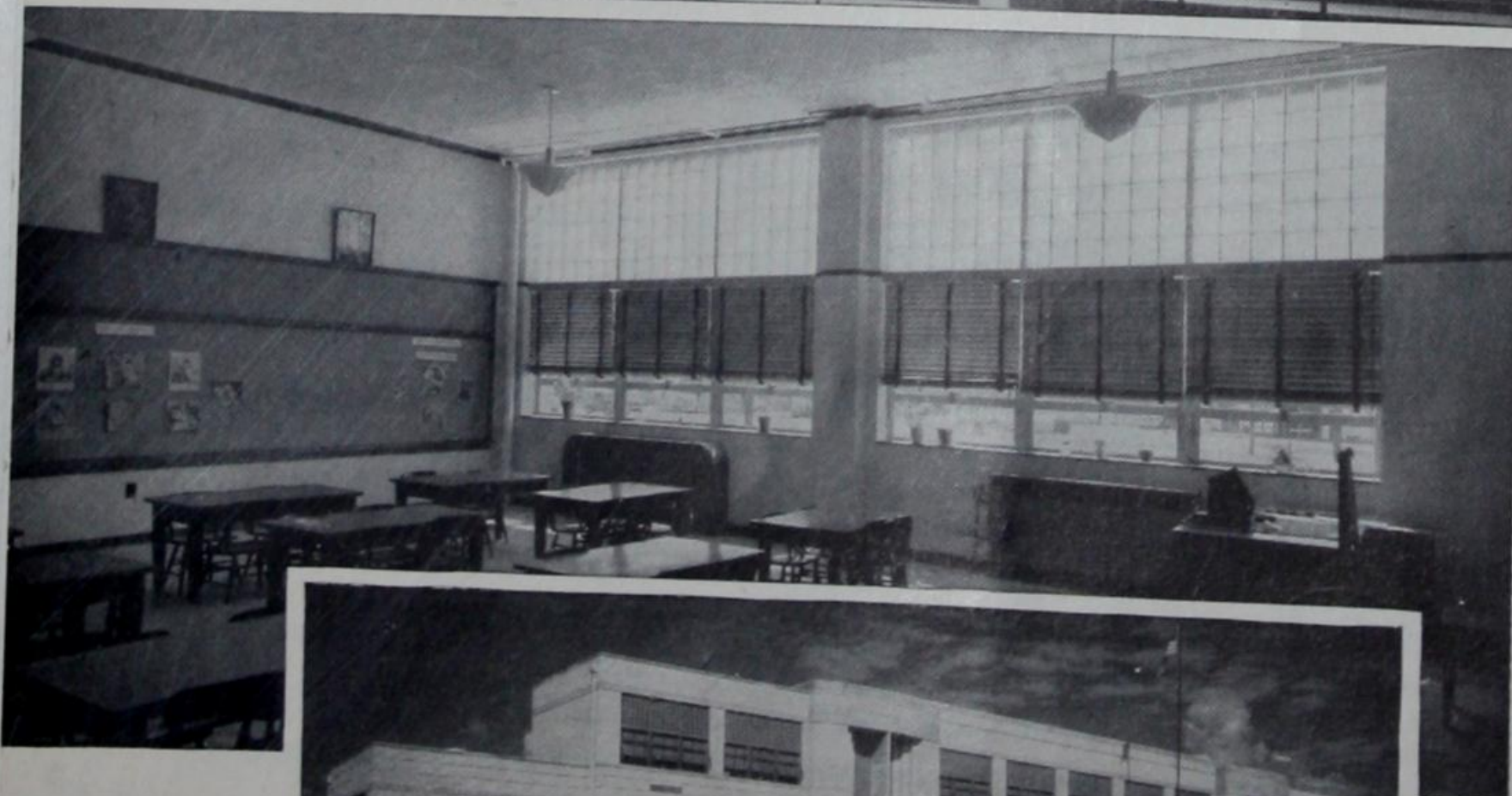
(Above, right) Swimming pools ought to be private . . . and they are when they get their light through PC Glass Block panels. Prying eyes are baffled by the non-transparent blocks. And they reduce heating and artificial light costs. Harold Bush-Brown and J. H. Gailey, Supervising Architects; M. L. Jorgensen, Designer.



(Above) PC Glass Blocks do double duty here. They flood the stairway and the hall with daylight—and they present an attractive appearance both inside and out. This use of PC Glass Block panels has proved both popular and practical. Architect: Louis H. Gerding.

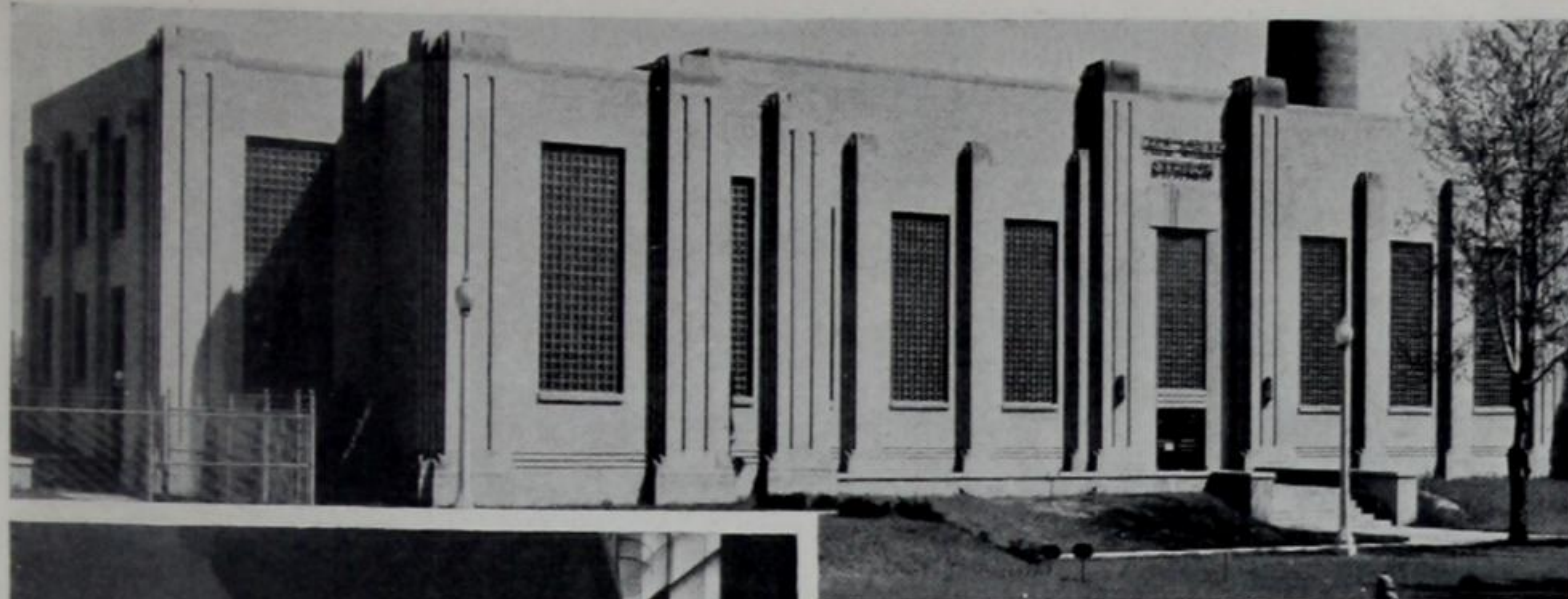
(Left, above) An old school problem settled—how to light gymnasiums adequately and safely. PC Glass Blocks turn the trick easily. And they guard the privacy of the students while they play. Further, think what a reduction in heating costs results when a huge light-transmitting area like this is insulated. Architect: Oren Thomas.

(Left) There's plenty of daylight for everybody in this classroom. PC Prism Light-Directing Glass Blocks were used to provide good daylight for students far from outside walls. This is accomplished by the prisms in the interior faces of the blocks. They direct the transmitted sunlight upward to the ceiling, from which it is reflected down to desks far from the windows. Note, in the exterior view of this same school (below) how the glass block panels enhance the beauty of the entire building. Architects: Overend and Boucher.





# PC Glass Blocks FOR MODERN, EFFICIENT PUBLIC BUILDINGS



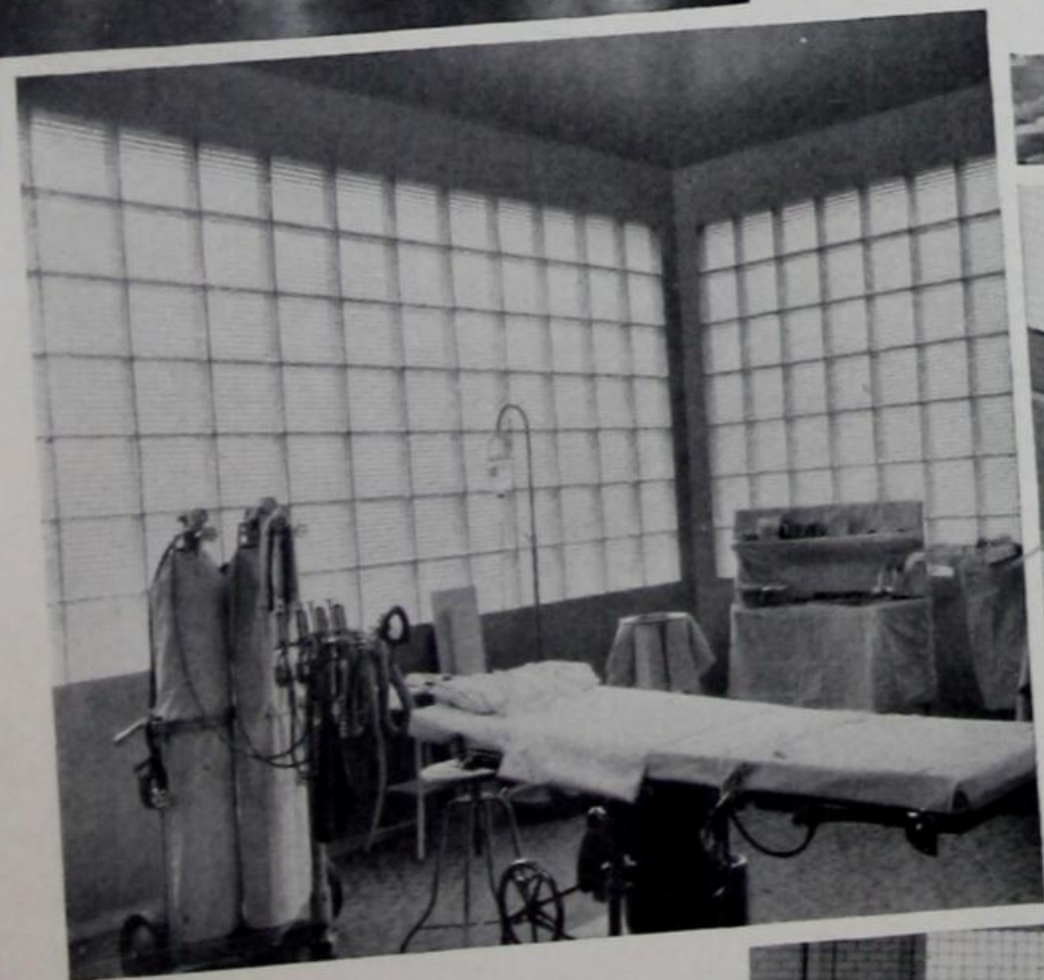
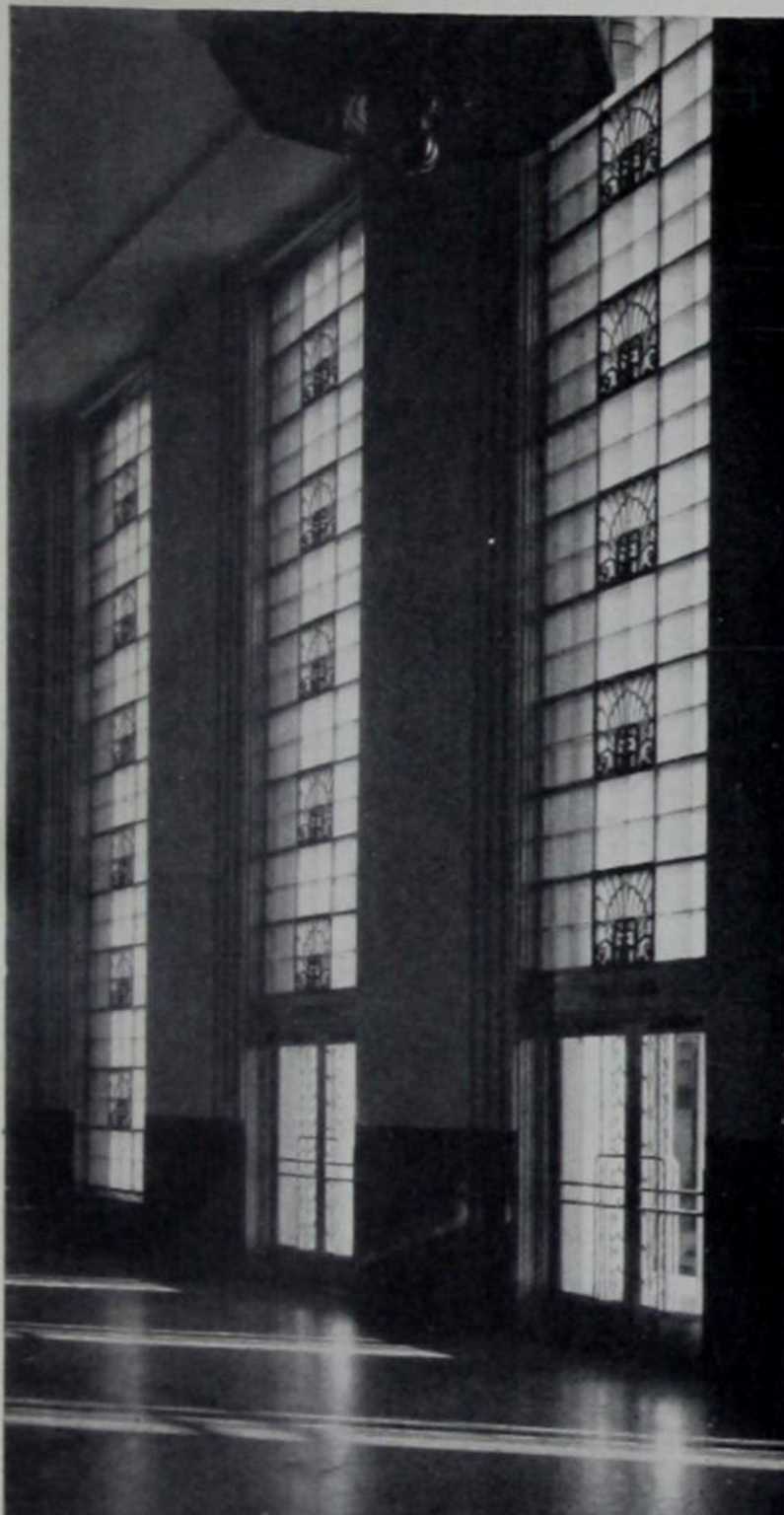
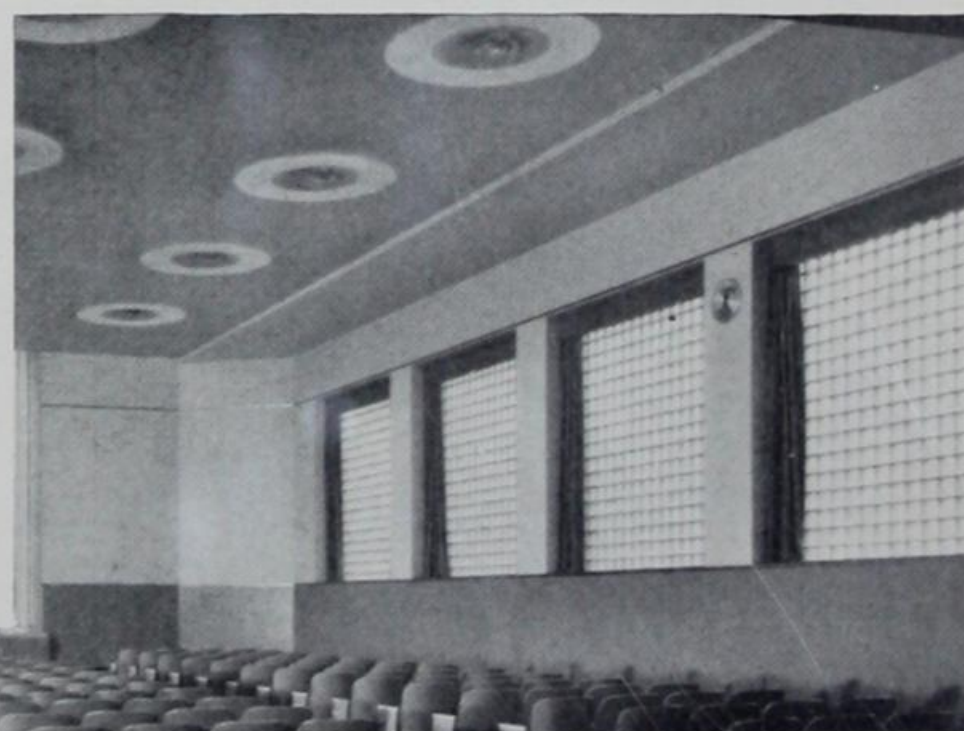
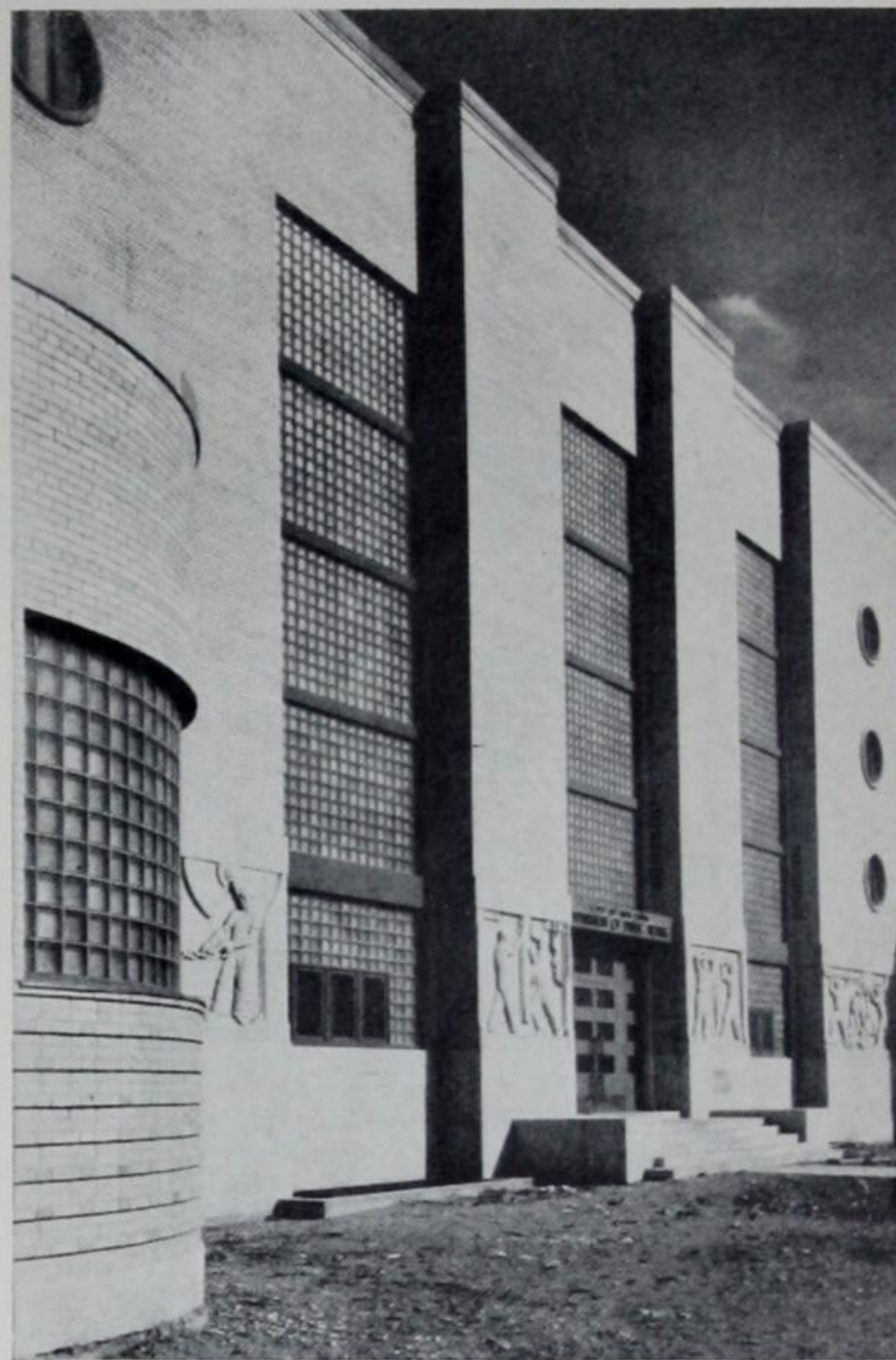
(Above) At this attractive pumping station, PC Glass Blocks provide daylight—and smart appearance, too. Complete privacy is assured by the diffusion of light achieved by the pattern in the glass block faces.

(Right) In this sewage treatment works beauty is combined with practicability. PC Glass Blocks fit in perfectly with the modern, trim facade of this building. The big panels flood the huge interiors with well-diffused daylight. Designed by and constructed under the supervision of the Department of Public Works, City of New York.

(Left) True architectural beauty is achieved in this modern building by the considered use of PC Glass Blocks and wrought metal over the entrances. The possibilities for building beauty possessed by these blocks are almost limitless.

(Right) Building auditoriums daylighted by PC Glass Block panels are becoming more and more numerous. And naturally so . . . because while the blocks transmit daylight generously . . . and even diffuse or direct the light as desired, depending upon the pattern used . . . they also do away with outside distractions.

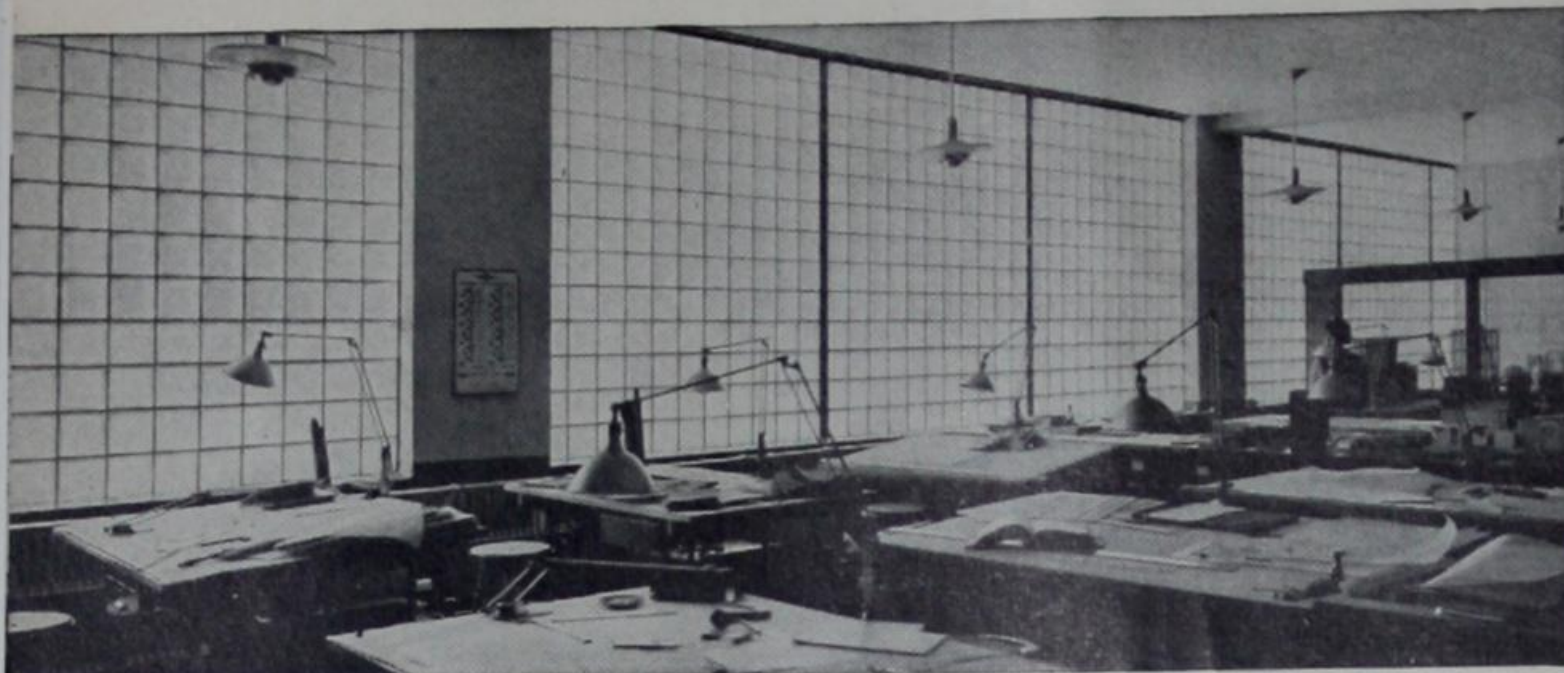
(Below, left) Operating rooms need lots of diffused daylight. PC Glass Block panels supply it. At the same time, they guarantee quieter rooms because of their sound insulation. And better control of temperature and humidity.



(Left) PC Glass Blocks have found wide popularity in the construction of power houses. Large light-transmitting areas are desired to carry light well back into the large rooms. PC Glass Blocks provide daylighting without allowing the great heat loss that would be experienced were single glazing used in these large areas. And the low maintenance requirements of the glass block panels are well worth consideration.



# PC Glass Blocks FOR ATTRACTIVE STORES AND OFFICE BUILDINGS

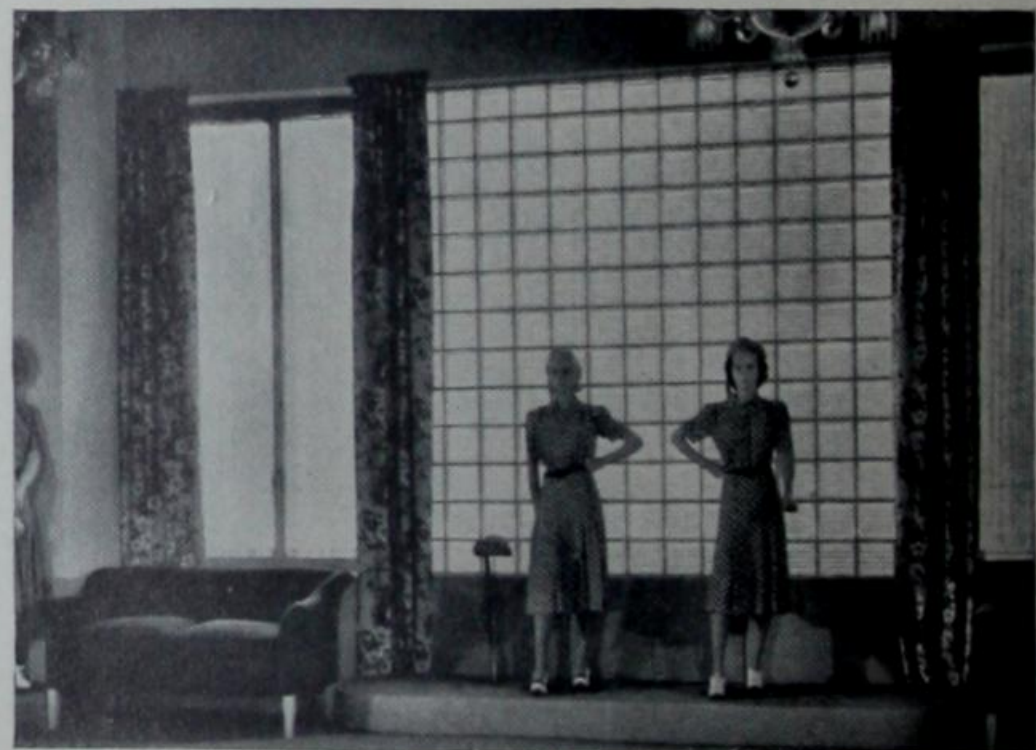
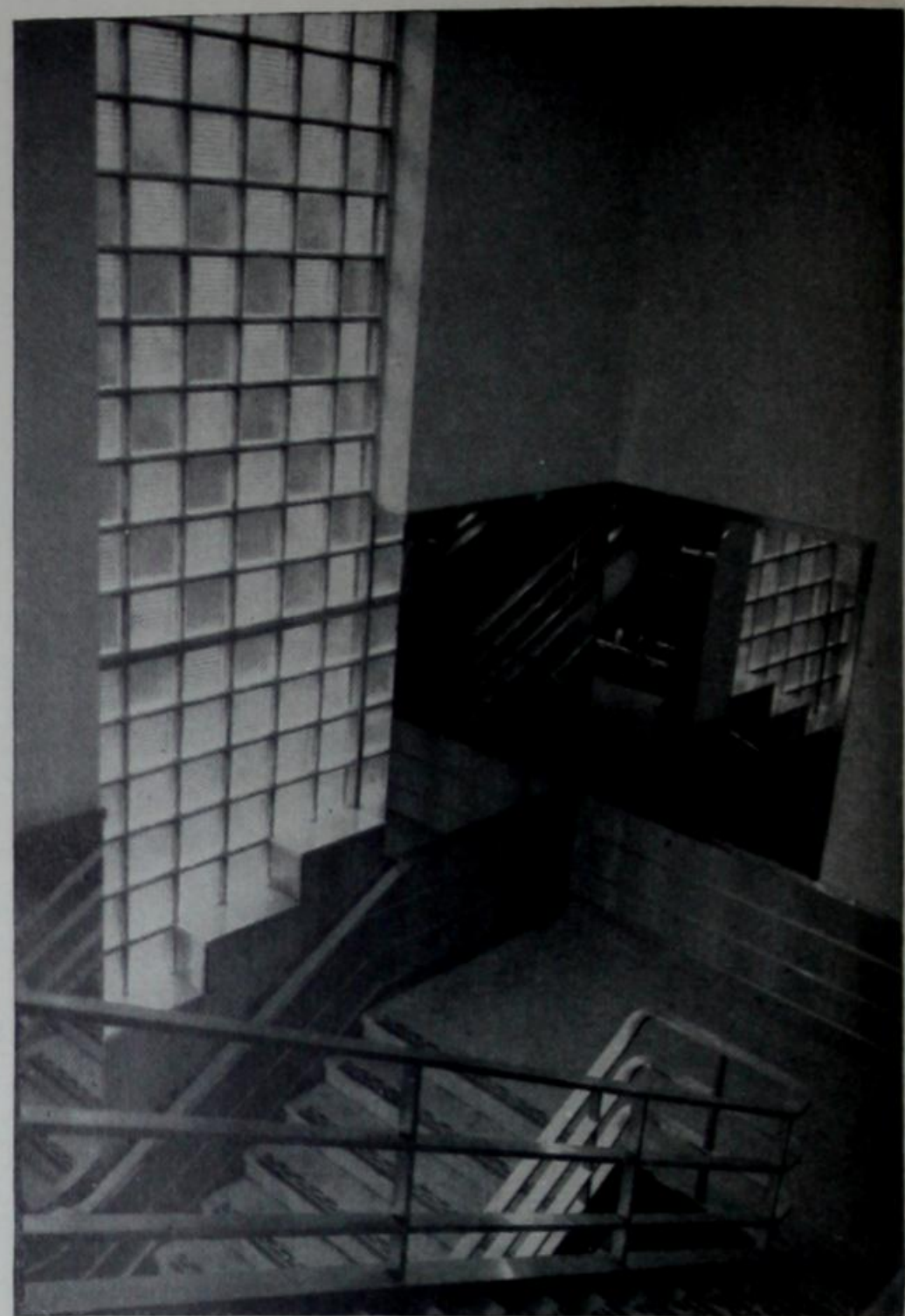


(Above) In this drafting room workers near the outside wall are protected from the glare of direct sunlight since all blocks below eye-level are specially designed for diffusion of light. The balance of the panel is Prism Light-Directing pattern, which directs sunlight upward to the ceiling, from which it is reflected to working areas far within the room.



(Right) PC Glass Blocks at stair landings keep stairs well-lighted, and consequently, safer. They are particularly well suited for this purpose, where it is desired to get lots of daylight and still shut off an unattractive view.

(Left) Tired eyes get a "lift" when large panels of PC Glass Blocks like these bring in floods of daylight. Well-lighted offices mean higher efficiency for workers, more comfort.



(Above) With a panel of daylight behind it, colored merchandise is seen in its true colors by the prospective purchaser. She can tell how it really looks. And sales are increased accordingly. PC Glass Blocks make stores quieter, too, easier to heat . . . and reduce maintenance costs because they are so easy to clean and have no sash to rot or corrode.

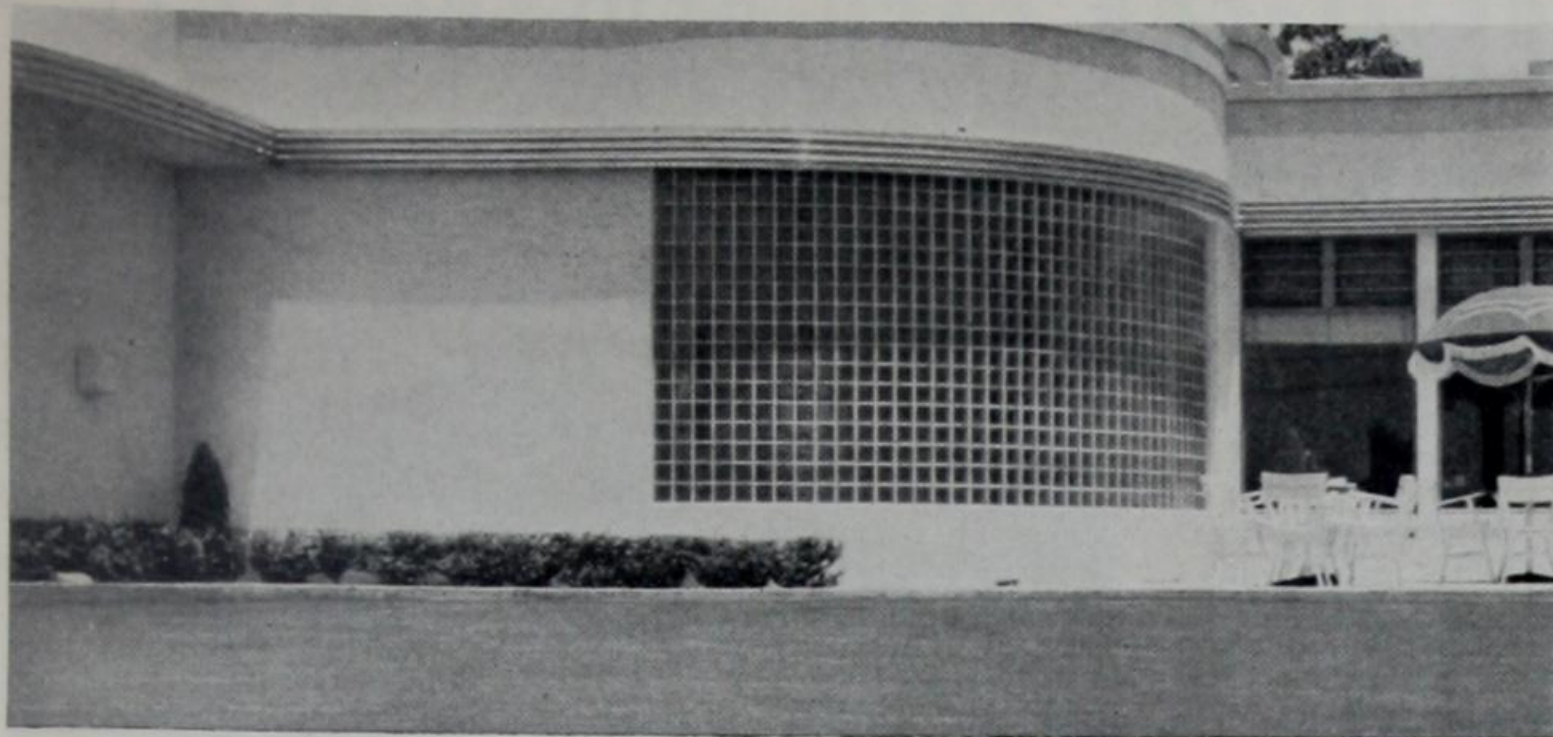
(Left, above) New light on banking comes through large panels of PC Glass Blocks set high in the walls of this modern banking room. Most people prefer to transact their financial business in a cheerful, well-lighted bank, rather than in a dark and gloomy one.

(Left) This bank building shows how effectively PC Glass Blocks can be used with other decorative building materials, such as Carrara Structural Glass, to attain a beautiful front—for stores, banks or any public buildings. The applications possible are as limitless as the imagination of the architect. Architects: LaRoche and Dahl.



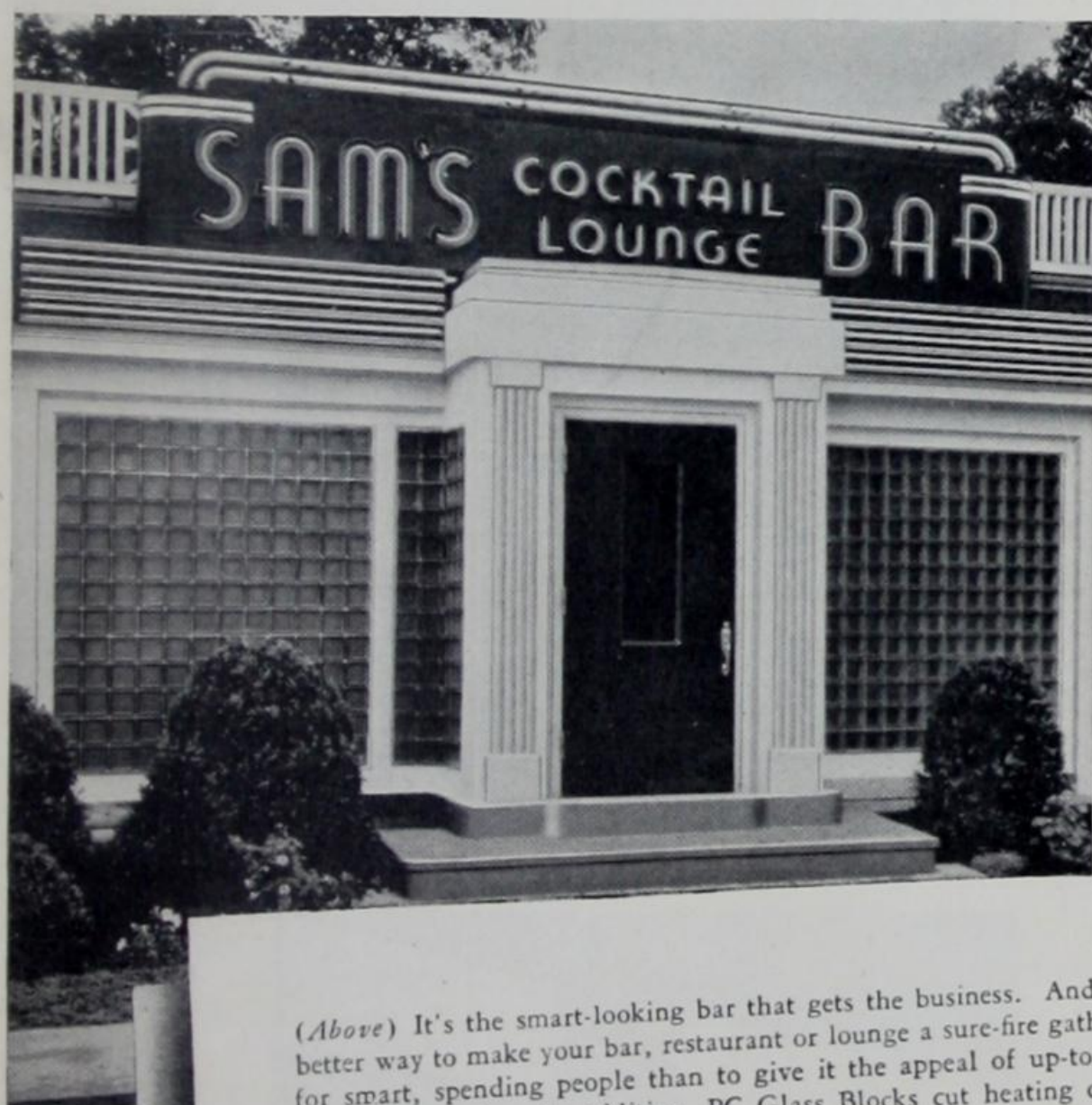


# PC Glass Blocks FOR DISTINCTIVE APARTMENTS, HOTELS, RESTAURANTS, BARS



(Above) There's a trend toward open-air dining these days . . . but people still like their surroundings to be attractive. And they will be . . . if you make use of the eye-catching beauty of PC Glass Blocks to dress up your restaurant or bar.

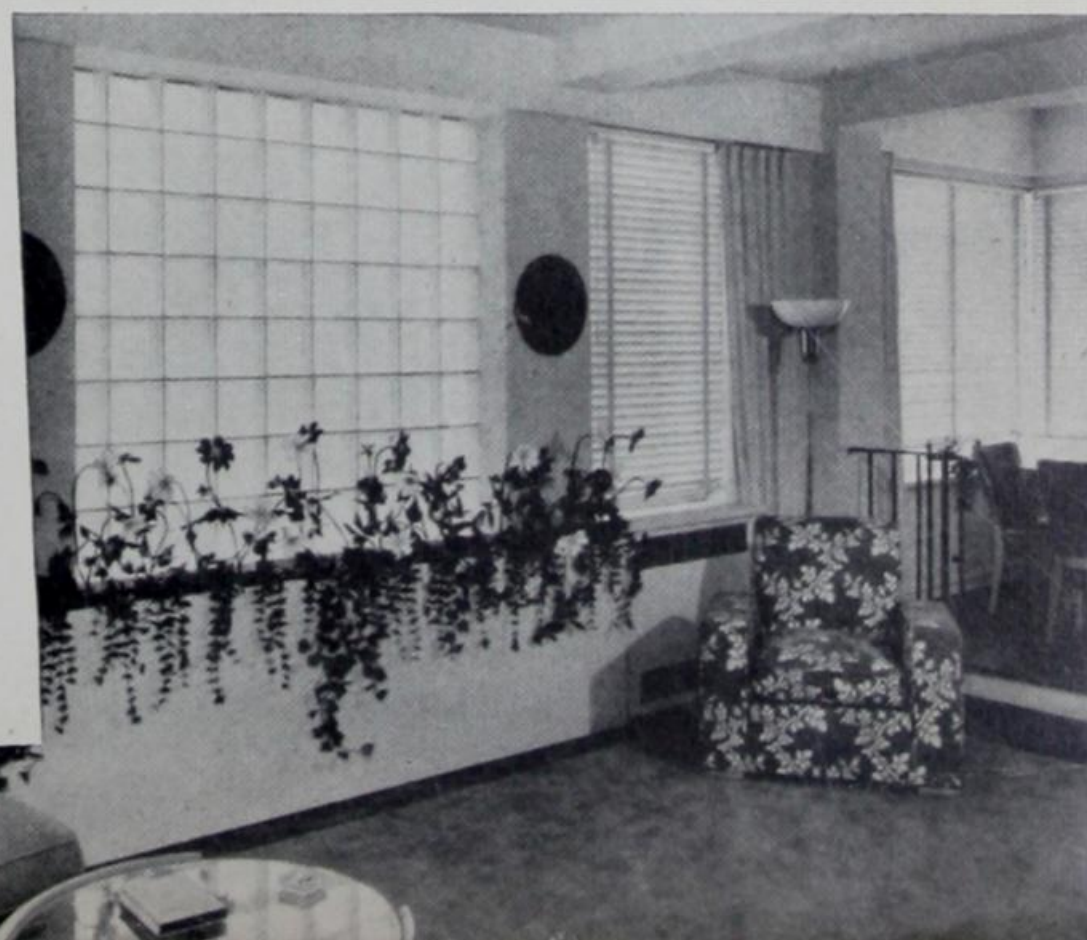
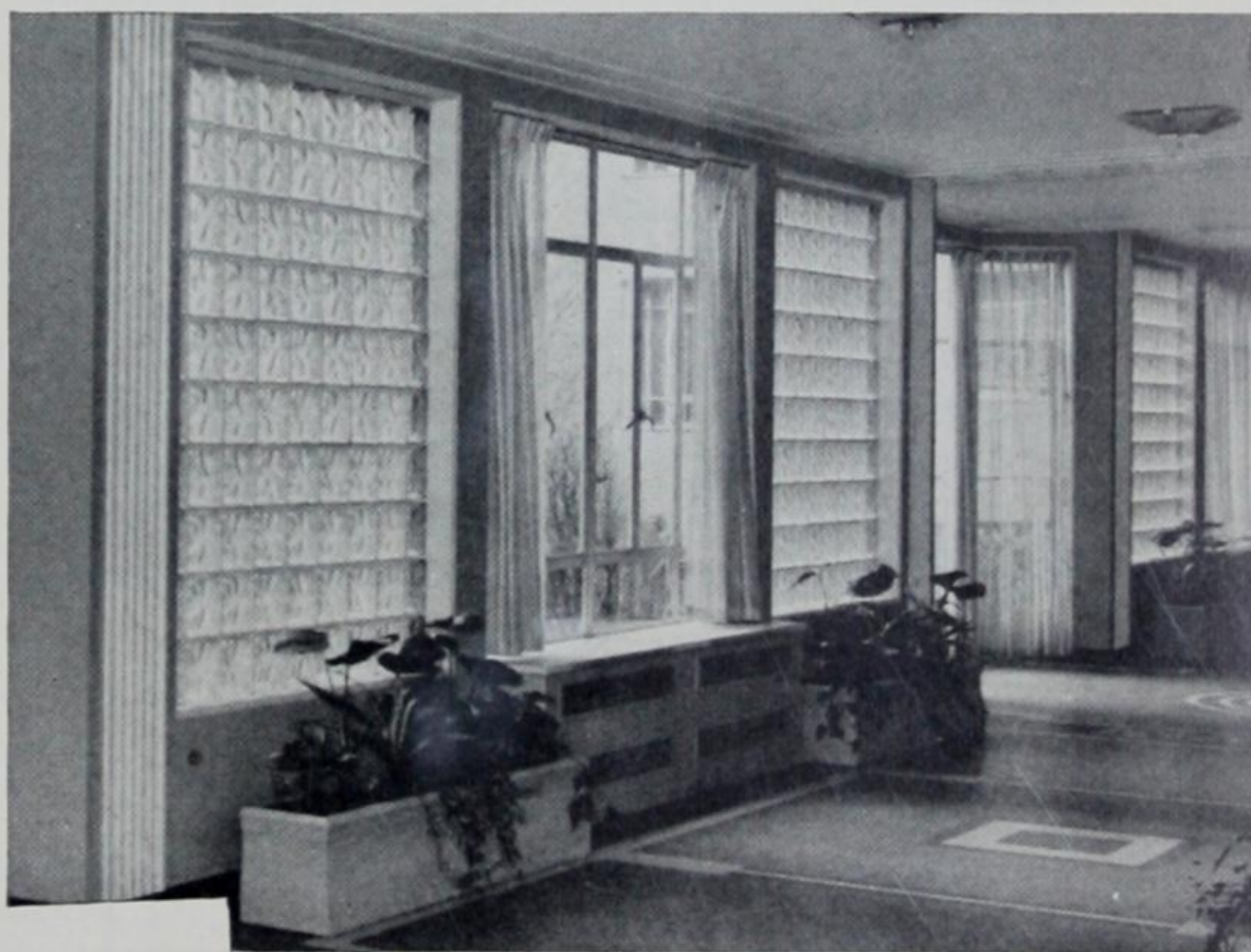
(Right) Food looks tastier in daylight . . . and PC Glass Block panels insure a plentiful supply of daylight in your restaurant. They make the atmosphere gayer and more cheerful . . . and you know how valuable that is. Furthermore, glass block panels keep out curious eyes . . . your patrons dine in quiet and privacy.



(Above) It's the smart-looking bar that gets the business. And there's no better way to make your bar, restaurant or lounge a sure-fire gathering place for smart, spending people than to give it the appeal of up-to-the-minute PC Glass Blocks. In addition, PC Glass Blocks cut heating costs, lower maintenance, solve interior lighting problems.

(Above, right) PC Glass Blocks provide this smart and attractive lobby with diffused daylight. And the easy cleanability of PC Glass Block panels makes them ideal for apartment and hotel use. Architects: Boak and Paris.

(Below, right) This bright, cheerful room is sure to please tenants. Here the architect is able to get light-transmission through almost the entire wall area, without subjecting the entire wall to the heat loss experienced with ordinary windows. Architect: H. I. Feldman.





# PC Glass Blocks

## THE IDEAL MATERIAL FOR SASH REPLACEMENT

Replace worn-out sash without using critical materials

When poor condition of window sash makes replacement necessary there's no need to wait. Do the job with PC Glass Blocks. They contain no critical materials—orders can be filled promptly and fully. Installation can be done quickly—by a regular mason. Take out the worn sash—scrap the metal. Install new chases if necessary. Then fill the openings with PC Glass Blocks. Once the job is done, you can forget about window sash troubles—for neither the glass blocks themselves nor the mortar joints will rot or corrode.

**UPON REQUEST WE WILL FURNISH DETAILS OF CONSTRUCTION WHICH PERMIT INSTALLATION OF BLOCKS WITHOUT USE OF CRITICAL MATERIALS**

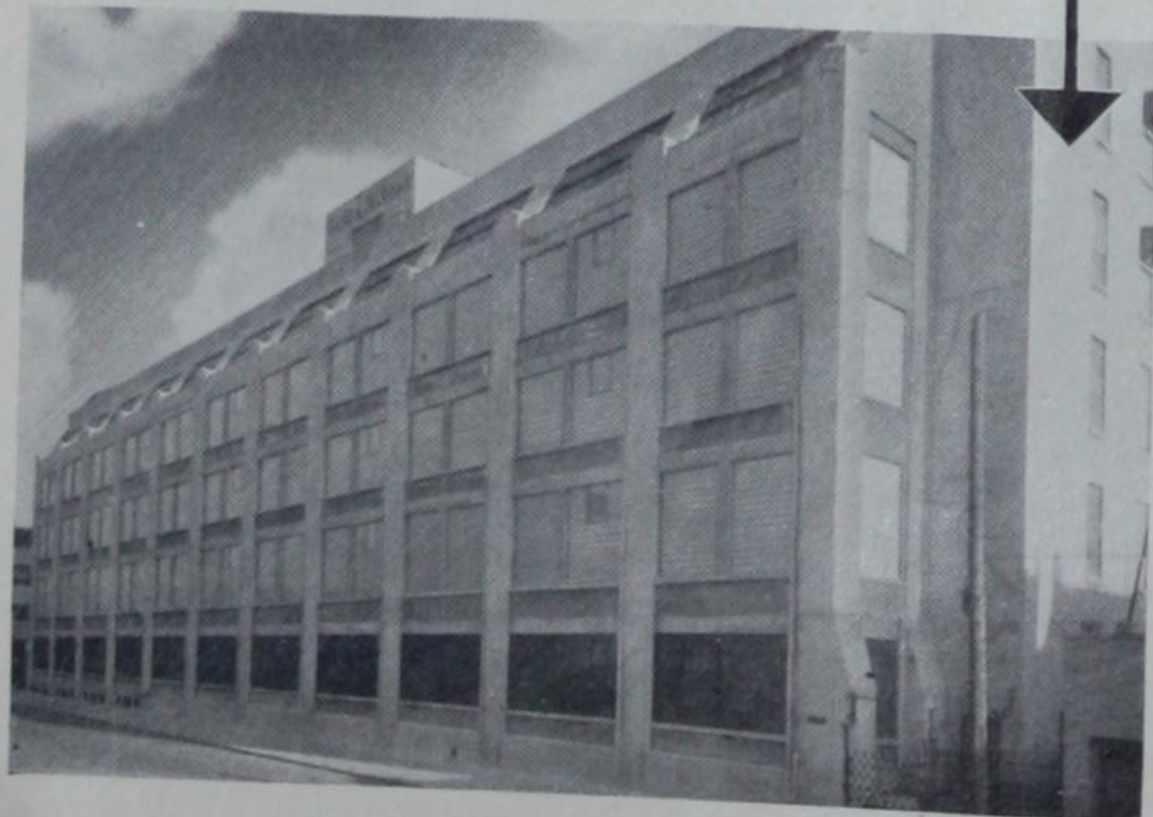
**IMPROVE PLANT OPERATING EFFICIENCIES**—PC Glass Blocks do double duty. For they not only serve as a timely means of replacing worn-out sash—they improve operating conditions at the same time. Many plant owners have found sash replacement one of the most valuable steps in plant modernization and rehabilitation. A survey of the many advantages discussed elsewhere in these pages will show how they can help you.

(BEFORE)



This Brooklyn textile plant, previously a silk mill, recently was converted to rayon production. For the rayon processes, high humidity was required and temperatures had to be controlled within close limits—conditions which could not uniformly be maintained with single-glazed windows. PC Glass Blocks were used for sash replacement because they provide insulation of light-transmitting areas.

(AFTER)



(BEFORE)

The operators of this plant are more than pleased with their sash replacement job—"We are well satisfied with the installation of glass blocks in our plant. Lighting and working conditions have improved considerably since this installation, plus the fact that our maintenance problem on steel sash is over with. The problem in our plant, with the excessive amount of condensation and steam, is quite an extreme test and we are very well satisfied with the results. Any future expansion will certainly include glass blocks."



(AFTER)



In this large plant PC Glass Blocks were chosen to replace worn-out window sash. The blocks were inserted into the existing openings. Maintenance is reduced—an especially important factor when window areas are high and difficult to reach.



# PC Glass Blocks

## TECHNICAL AND PERFORMANCE DATA

**THERMAL INSULATION**—Tests run during the past several years have established values for the over-all coefficient of heat transfer "U" as 0.40 to 0.43 for panels of 8-in. block constructed in the recommended manner. In computing heat losses through panels for design purposes, it is recommended that a "U" value of 0.49 be used for all block sizes and face patterns.

**SURFACE CONDENSATION**—Condensation will not start forming on the room side of glass block panels until the outside air has reached a temperature much lower than that necessary to produce condensation on single-glazed windows. Note accompanying chart.

### OUTDOOR TEMPERATURE REQUIRED TO PRODUCE CONDENSATION ON THE ROOM SIDE SURFACE OF PC GLASS BLOCK PANELS

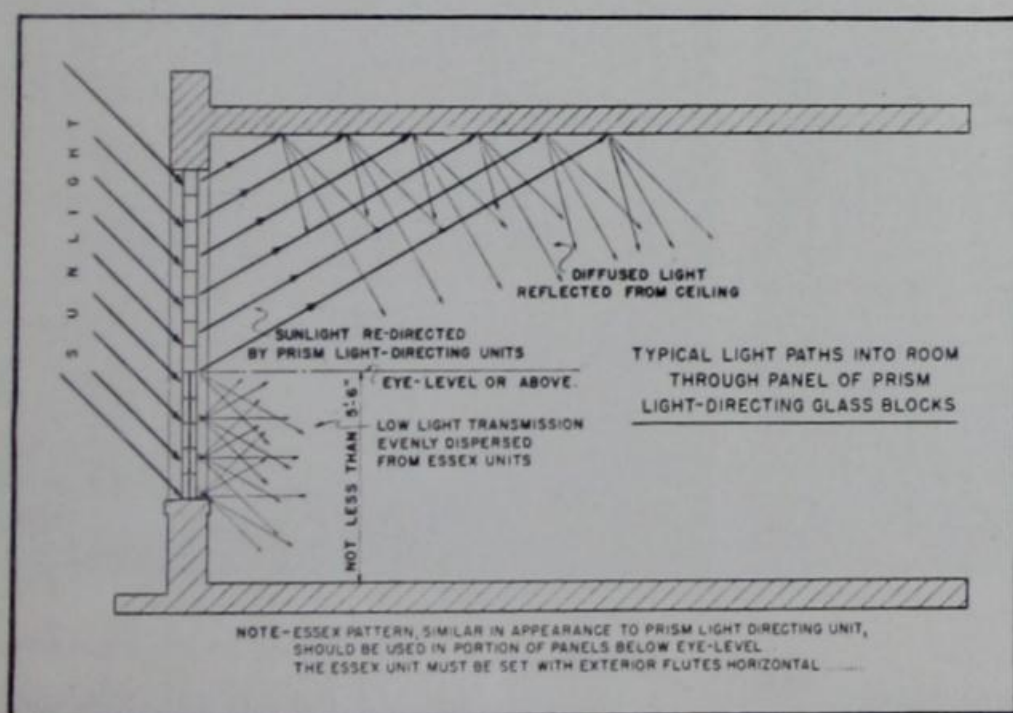
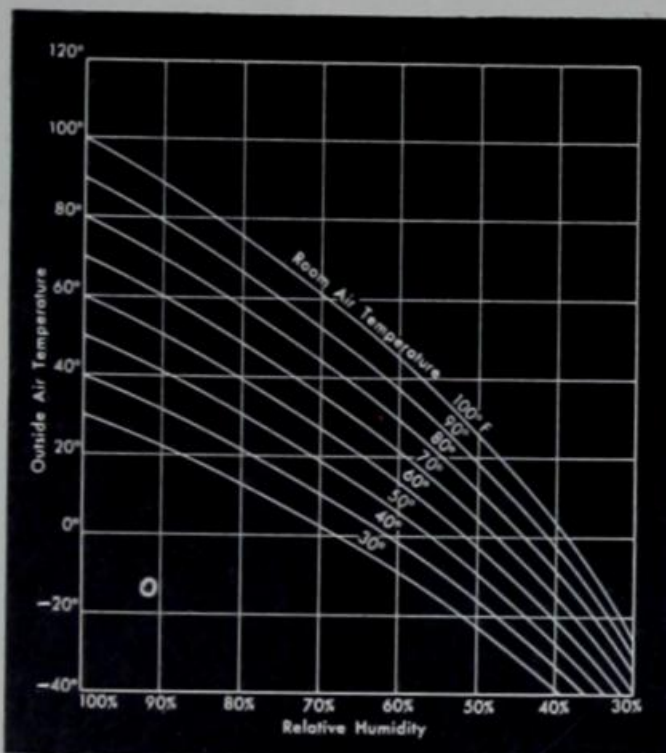
For example, with inside air at 70° F. and relative humidity at 40%, condensation will not begin to form on the interior surfaces of a glass block panel until an outdoor temperature of -14° F. is reached. Under similar conditions with single-glazed steel sash, moisture will begin to form when the outdoor temperature reaches +33° F.

### SOLAR HEAT GAIN

The use of glass blocks results in a marked reduction in the total solar heat gain as compared with ordinary windows. This factor is of considerable advantage in buildings that are properly air-conditioned, but does not eliminate the need for adequate ventilation or shading in non-air-conditioned rooms.

Based upon extensive tests, suggested figures for design computations are a maximum hourly rate of 41 B.T.U. and maximum daily rate of 250 B.T.U. total heat gain per square foot of glass block panel on South exposure, 40 degrees North Latitude for August 1.

For more complete data on solar radiation, refer to the current edition of the Heating, Ventilating and Air Conditioning Guide of the American Society of Heating and Ventilating Engineers.



**LIGHT TRANSMISSION AND DISTRIBUTION**—Various patterns of PC Glass Blocks may be classified as:

1. Semi-Diffusing (Argus, Argus Parallel Flutes, Decora, Reeded Decora, Saxon, Druid, Bristol).
2. Diffusing (Essex).
3. Light-Directing (Prism Light-Directing).

The semi-diffusing blocks afford a partial diffusion of transmitted light by virtue of the optical effect of the patterns.

The diffusing blocks accomplish a more complete diffusion of

transmitted light because of the specially designed patterns impressed in the inside as well as the outside surface of the block.

The light-directing blocks redirect transmitted light by means of optical refraction in horizontal prisms pressed into the inside block faces. Illumination on working areas is provided by reflection of light from the ceiling, and sunlight is directed almost entirely outside the field of normal vision so that glare conditions are virtually eliminated. In the diagram below, left, typical light paths are shown.

**LIGHT TRANSMISSION—SINGLE BLOCKS**—Light transmission measurements through the faces of individual glass block units have been made by two somewhat different methods in the absence of any generally accepted standard. Average values for each PC Glass Block pattern are:

Argus	.....	.80%	(of incident light)
Argus Parallel Flutes	.....	.80%	(of incident light)
Bristol	.....	.70%	(of incident light)
Decora	.....	.80%	(of incident light)
Reeded Decora	.....	.80%	(of incident light)
Druid	.....	.80%	(of incident light)
Essex	.....	.50%	(of incident light)
Prism Light-Directing	.....	.65%	(of incident light)
Saxon	.....	.80%	(of incident light)
Vue	.....	.85%	(of incident light)

**SOUND INSULATION**—Glass block panels have sound insulation properties equal to or better than other forms of masonry construction having equal weight per unit surface area, and are decidedly superior to single-glazed sash. Tests give sound reduction factors for standard glass block panels of 37.6 to 42.0 decibels.

**CRUSHING STRENGTH**—Repeated tests made on square walleets laid up with PC Glass Blocks show a minimum panel compressive strength of 400 to 600 lbs. per sq. in. of gross loaded area. This crushing strength is well above that of many accepted masonry constructions, and is entirely adequate to resist safely the forces created by conditions within the glass block panels themselves.

However, glass block construction should never be used for load-bearing walls or panels. Adequate provision must be made for the support of construction above glass block panels, and expansion joints must be provided at head and jambs of all panels in exterior walls.

**BOND STRENGTH**—PC Glass Blocks have a special grit-bearing, moisture-and-alkaline-resisting, plastic coating on all mortar edges. This insures a complete and permanent bond between the glass and the cement mortar and provides a panel construction having a high degree of wind resistance and water-tightness.

**WIND RESISTANCE**—From wind pressure tests on PC Glass Block Panels ranging in area from 50 sq. ft. (5' x 10') to 256 sq. ft. (16' x 16'), it has been found that any panel properly supported at its edges and within the area limits\* recommended will withstand a wind load of 20 lbs. per sq. ft. with a factor of safety of at least 2.7.

\*For area-limits recommended for PC Glass Block panels, consult panel size limitation data on pages 14 and 16.

**WEATHER RESISTANCE**—Under all sorts of weather conditions, PC Glass Block construction has proved its durability. Tests of panels subjected to repeated cycles of heating, water spray and freezing show no sign of cracking or other structural deterioration, although temperatures well above and below those encountered in any exposure have been regularly used.

Experience, both in the laboratory, where some 4000 sq. ft. of panels 8' x 10' in size have been tested, and also in the field where records of a number of jobs are available, conclusively indicates that properly constructed panels of PC Glass Blocks will be free from leakage.

### ESTIMATING DATA

(For 100 sq. ft. of panel laid with 1/4-in. visible mortar joints.)

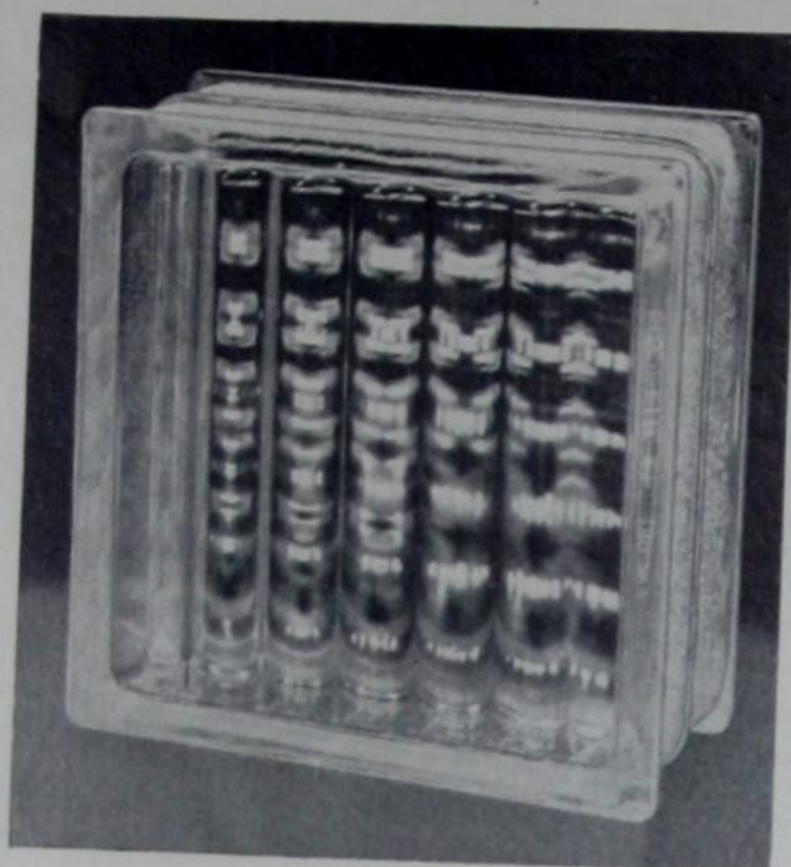
Size of Block	6"	8"	12"
Number of Blocks	400	225	100
Weight of Panel	2000 lbs.	1800 lbs.	1900 lbs.
Volume of Mortar	4.3 c.f.	3.2 c.f.	2.2 c.f.



# PC Glass Blocks

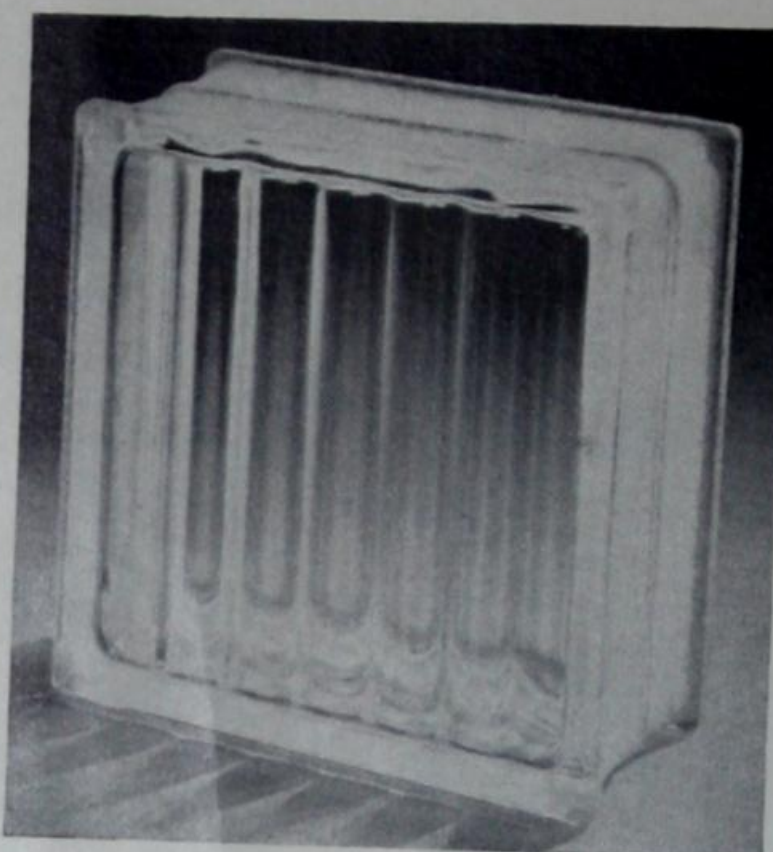
AVAILABLE IN

For light distribution data for all blocks, see page 9



## ARGUS

1. A conventional pattern designed for general use, both decorative and utilitarian.
2. High light transmission, good light diffusion.
3. Can be laid with flutes vertical or horizontal on room side with equally pleasing and efficient results. Caution: When used in combination with corner or radial blocks, if pattern match is desired, the standard blocks must be laid with flutes horizontal on room side.
4. Smooth outside faces permit maximum cleanability.
5. Pattern description: Smooth outside faces, interior flutes identical, assembled at right angles.



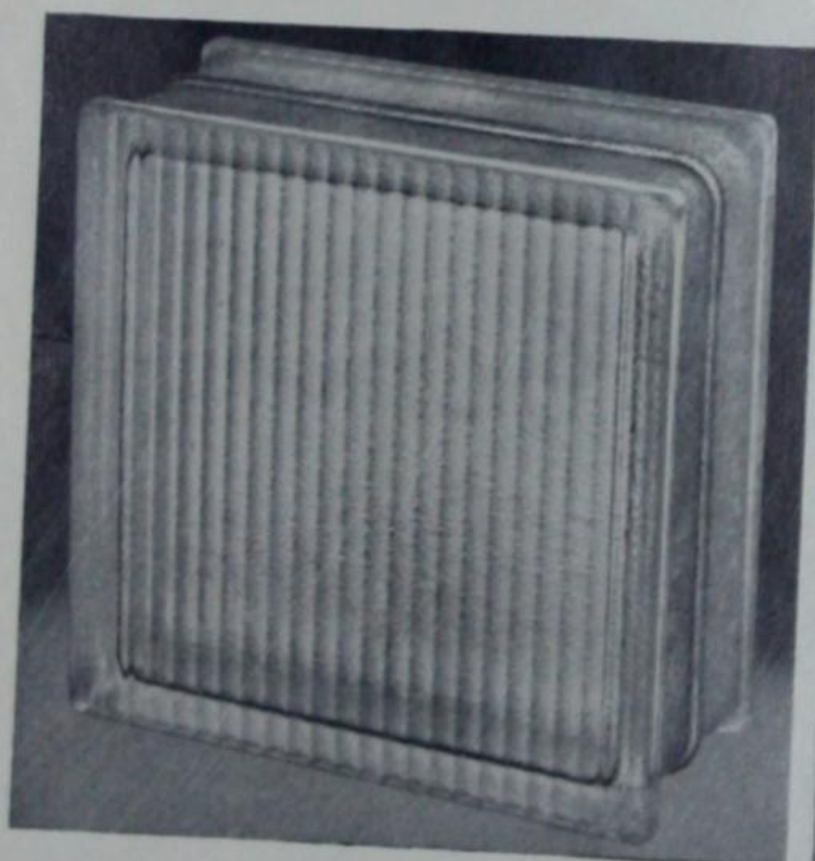
## ARGUS PARALLEL FLUTES

1. A conventional pattern designed for general use, both decorative and utilitarian.
2. High light transmission, good light diffusion.
3. Can be laid with flutes vertical or horizontal with equally pleasing and efficient results. Caution: When used in combination with corner or radial blocks, pattern match can be obtained on only one side of panel.
4. Smooth outside faces permit maximum cleanability.
5. Pattern description: Smooth outside faces, interior flutes identical, and parallel.



## DECORA

1. A decorative pattern ideally suited to harmonize with both modern and conventional design.
2. High light transmission with irregular diffusion and high translucency.
3. Asymmetric design permits laying without regard to pattern.
4. Smooth outside faces insure maximum cleanability.
5. Pattern description: Smooth outside faces, asymmetric design on both interior faces.



## BRISTOL

1. Designed to provide softer, more diffused light.
2. Should be laid with exterior flutes vertical.
3. Cleanability maintained by the smooth exterior flutes and lightly etched border.
4. Pattern description: Narrow vertical flutes and lightly etched border on both outside faces, and flat etched inside faces.

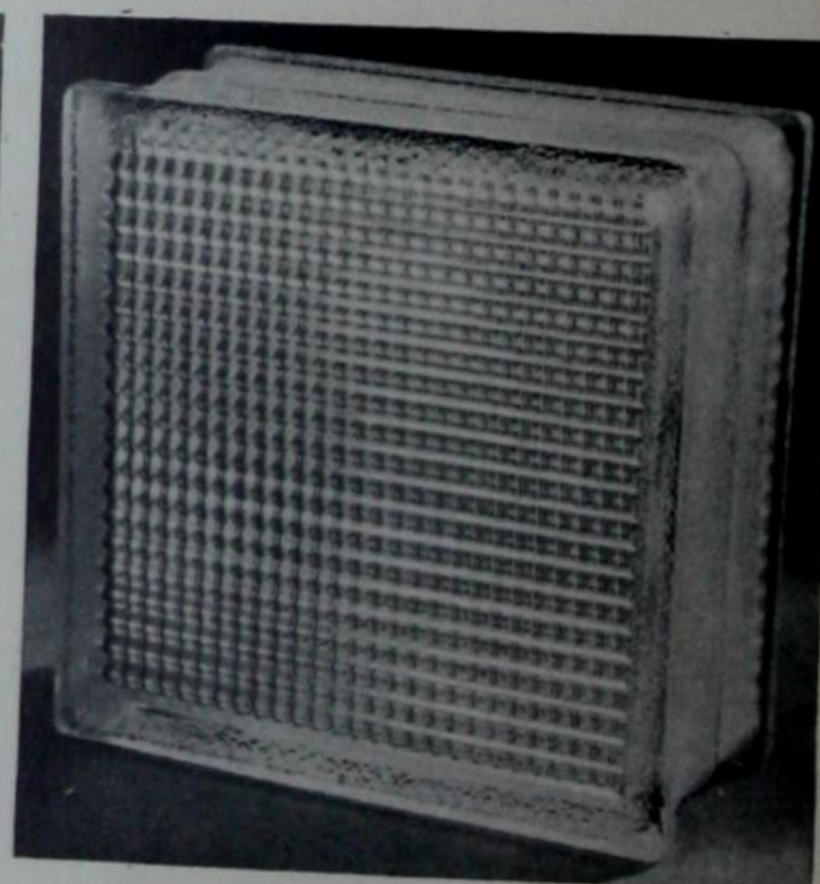
NOTE: This block is supplied in the 7 3/4" sizes only.



## DRUID

1. Designed to provide high light transmission and closely match the Prism Light-Directing unit. For use on elevations without sun exposure when Prism Light-Directing units are used on adjacent sun exposure elevations.
2. Must be laid with exterior flutes vertical.
3. Cleanability is maintained by the smooth exterior flutes and lightly etched border.
4. Pattern description: Narrow vertical flutes and lightly etched border on both outside faces, horizontal flutes on both inside faces. Closely matches appearance of Prism Light-Directing unit.

NOTE: This block is supplied in the 7 3/4" sizes only.



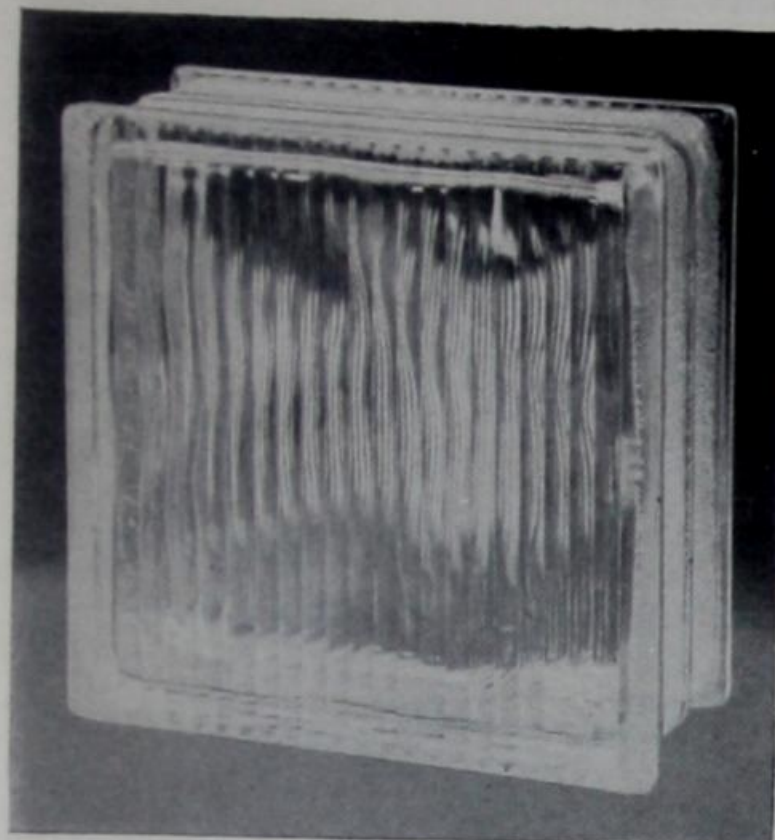
## ESSEX

1. Specially designed for low light transmission: For use below eye-level in panels containing Prism Light-Directing Blocks and on elevations subjected to severe exposure to direct sunlight where Prism Light-Directing Blocks are not adaptable.
2. Must be laid with exterior flutes horizontal.
3. Pattern description: Horizontal spreading flutes and lightly etched borders on both exterior faces, vertical Prisms on both interior faces.

NOTE: This block is supplied in the 7 3/4" size only.

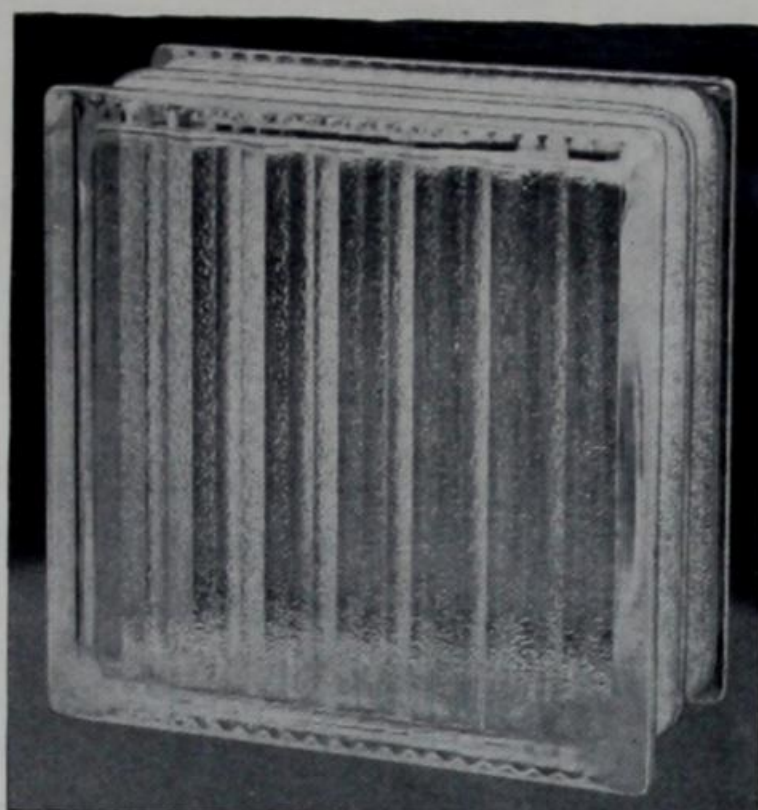


# A WIDE SELECTION OF SIZES AND PATTERNS



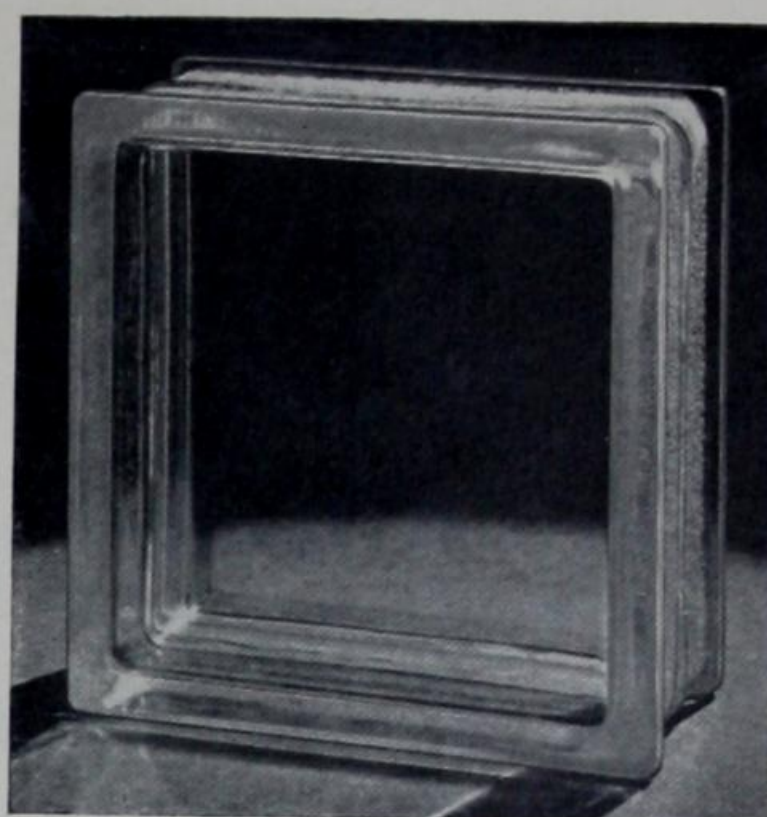
## REEDED DECORA

1. A modified Decora design to increase irregular pattern effects.
2. High light transmission with good diffusion and superior obscurity.
3. Should be laid with exterior reeds vertical.
4. Cleanability is maintained by the smoothly rounded exterior reeds.
5. Pattern description: Narrow parallel reeds on both exterior faces, asymmetric design on both interior faces.



## SAXON

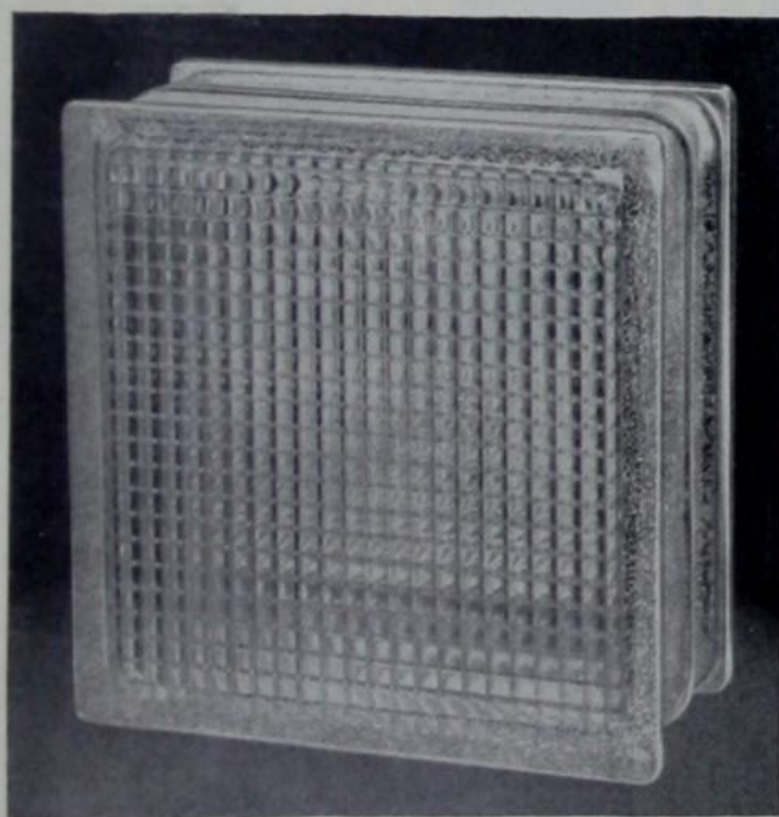
1. A pleasing uniform pattern designed for even light diffusion and brightness reduction, but with good light transmission.
2. Interior etched surfaces with exterior reeds produce maximum obscurity.
3. Should be laid with exterior reeds vertical.
4. Cleanability is maintained by the smoothly rounded exterior reeds.
5. Pattern description: Narrow parallel reeds on both exterior faces, parallel to wide flutes on both interior faces. Both interior faces are etched.



## VUE

1. A pattern employing clear glass surfaces to permit sufficient general vision of large objects or movements beyond the panel to prevent the "shut-in" feeling. However, visibility of sharp details is not possible under most conditions.
2. High light transmission.
3. Cleanability is assured by smooth exterior surfaces.
4. Pattern description: Clear, smooth interior and exterior surfaces.

NOTE: This block supplied in the 7 3/4" sizes only.



## PRISM LIGHT-DIRECTING

1. Specially designed to control the direction of sunlight transmitted by the block, and under proper conditions, to provide improved natural illumination.
2. By means of unlike prisms on the two inside faces, the greater part of the transmitted light is directed upward—away from the direct vision or glare zone—to the ceiling, where it may be reflected downward to provide indirect "daylighting."
3. Can be set in one position only—block is marked to indicate correct setting. Must not be used below eye level. For lower portions of panels below eye level use Essex Blocks.
4. Smooth vertical exterior flutes and lightly etched border insure easy cleaning.
5. Pattern description: Narrow vertical flutes and etched border on both outside faces, horizontal prisms on both inside faces.

NOTE: This block supplied in 7 3/4" size only.

(Subject to change without notice)

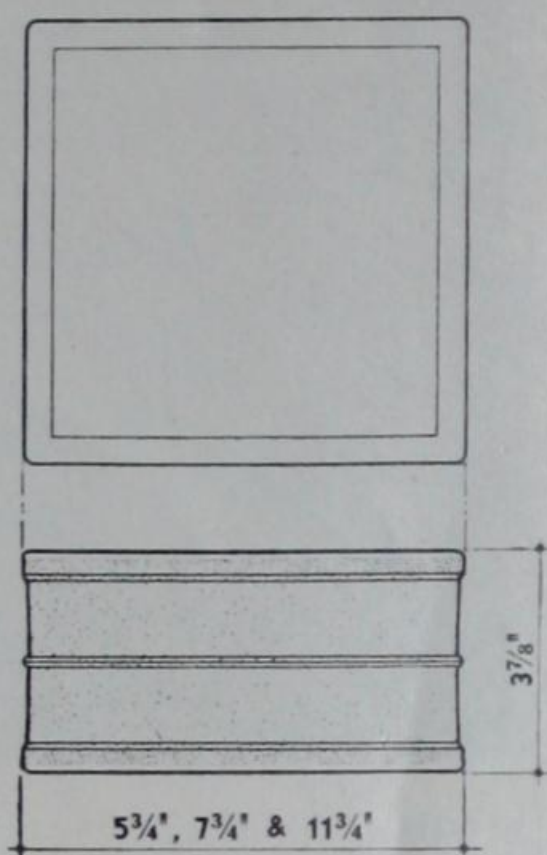
PATTERNS	SIZES AND SHAPES AVAILABLE					
	5 3/4" Square	7 3/4" Square	11 3/4" Square	5 3/4" Corner	7 3/4" Corner	7 3/4" Radial
Argus	•	•	•	•	•	•
Argus Parallel Flutes	•	•	•			
Bristol		•			•	•
Decora	•	•	•	•	•	•
Druid		•			•	•
Essex		•				
Prism Light-Directing		•				
Reeded Decora	•	•	•	•	•	•
Saxon	•	•	•	•	•	•
Vue		•				•



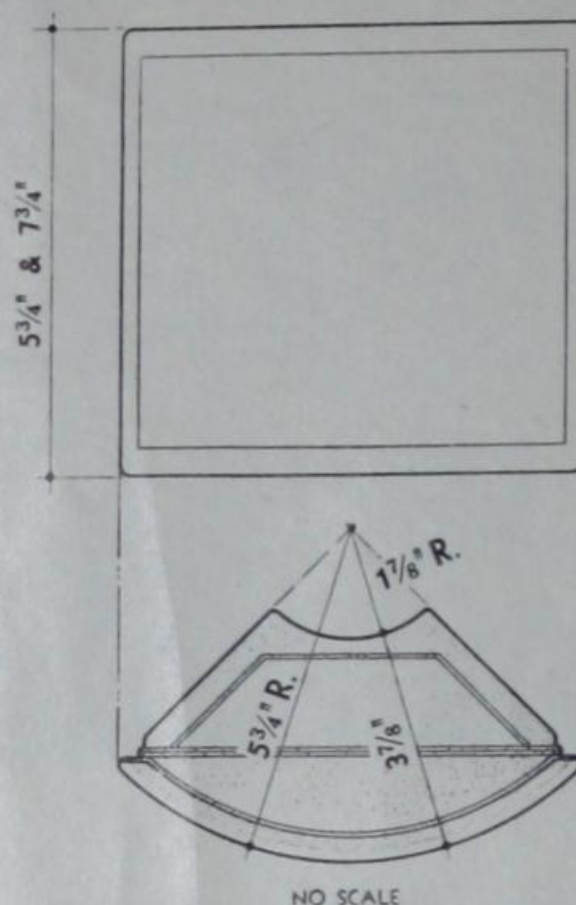
# PC Glass Blocks

## SIZES AND SHAPES AVAILABLE

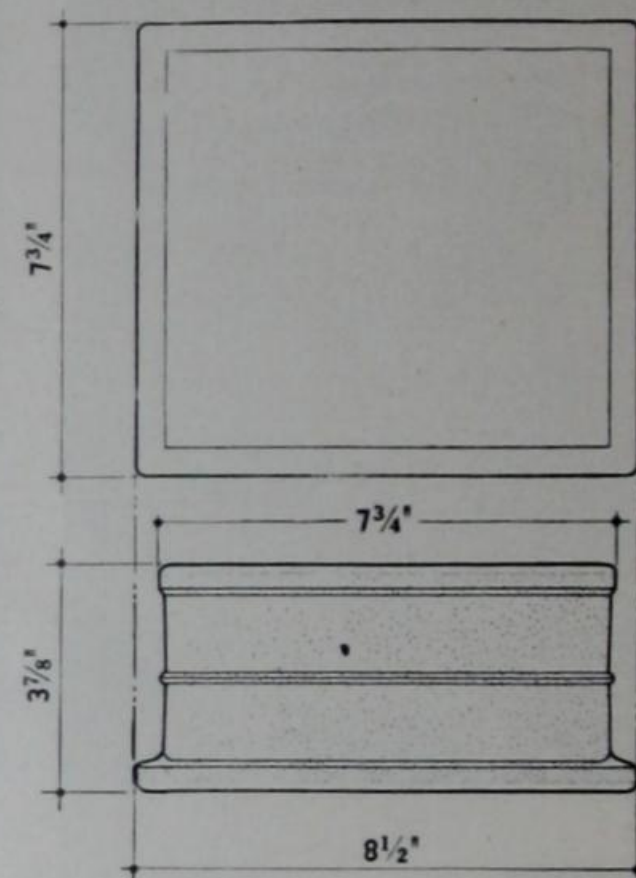
### SQUARE BLOCKS



### CORNER BLOCKS



### RADIAL BLOCKS



**PITTSBURGH NV-3389 WATERPROOFING COMPOUND**—To be added to the mortar to conform with PC specifications. Use one (1) quart per bag of cement.

Available in one-quart, one-gallon, and five-gallon containers.

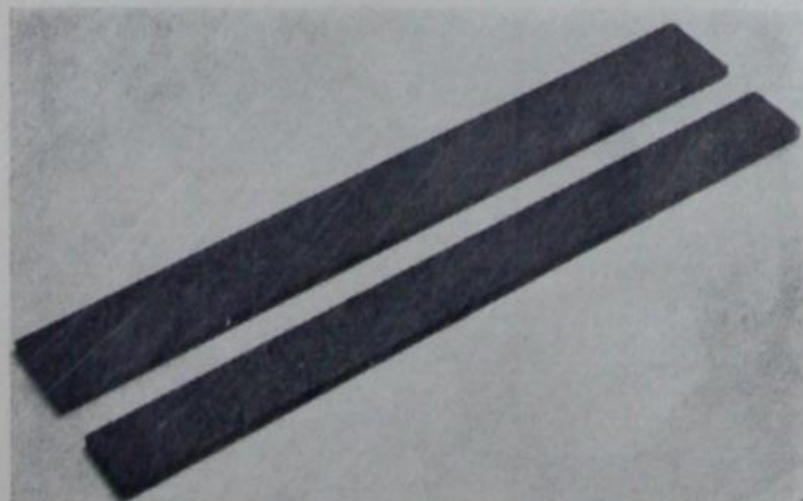


## ACCESSORIES

These PC accessory materials can be obtained from all suppliers of PC Glass Blocks



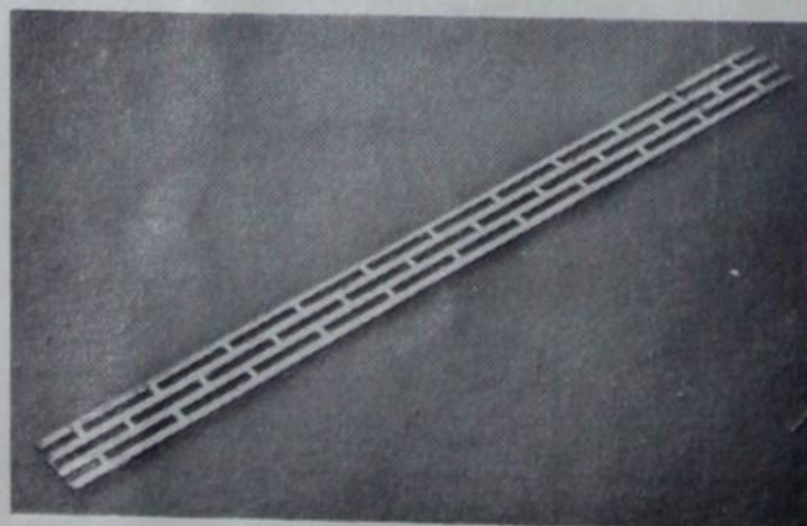
**PC ASPHALT EMULSION**—To be used on all sil to form a waterproof joint. Also used to adhere expansion strips to side and head jambs before installing glass blocks. See specifications for proper application. Available in one-quart, one-gallon, and five-gallon containers.



**PC EXPANSION STRIPS**—To be used in expansion spaces at side and head jambs installed in accordance with PC specifications. Strips are supplied with heavy paper on one face. The paper surface is to be installed facing the Block Panel.

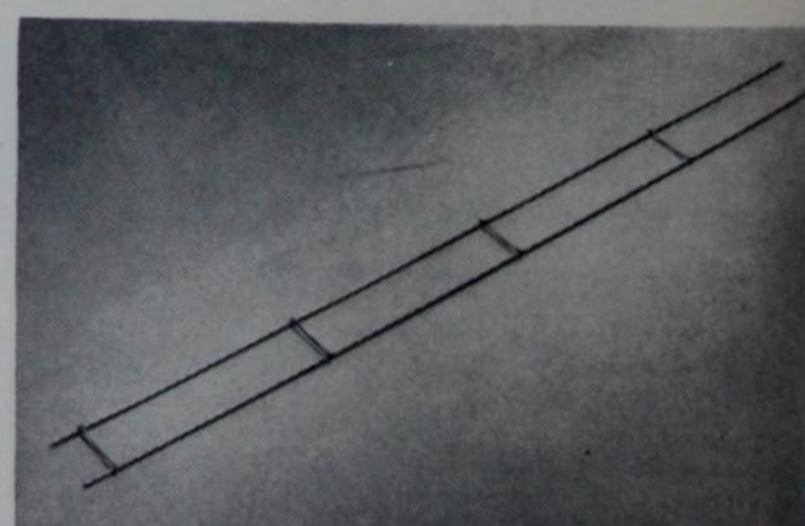
Available in the following sizes:

- $4" \times \frac{1}{2}" \times 36"$  (For use in Chase Construction)
- $3" \times \frac{1}{2}" \times 36"$  (For use in wall anchor construction)



**PC WALL ANCHORS**—To be used for supporting panels up to 100 sq. ft. in area where permitted by building code requirements. Spaced and installed in accordance with PC specifications. Wall Anchors are No. 20 gauge perforated steel galvanized after fabrication.

Available in 2'-0" lengths  $1\frac{3}{4}"$  wide.



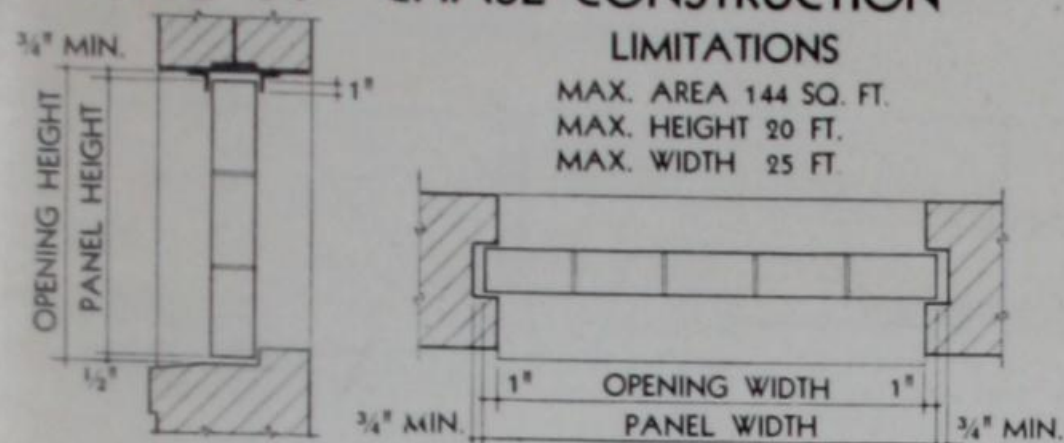
**PC WALL TIES**—To be used in horizontal joint glass block panels, spaced and installed in accordance with PC specifications. Wall Ties are formed of No. 9 galvanized wires spaced 2" apart with No. 9 galvanized cross wires welded every 8".

Available in 8' lengths.

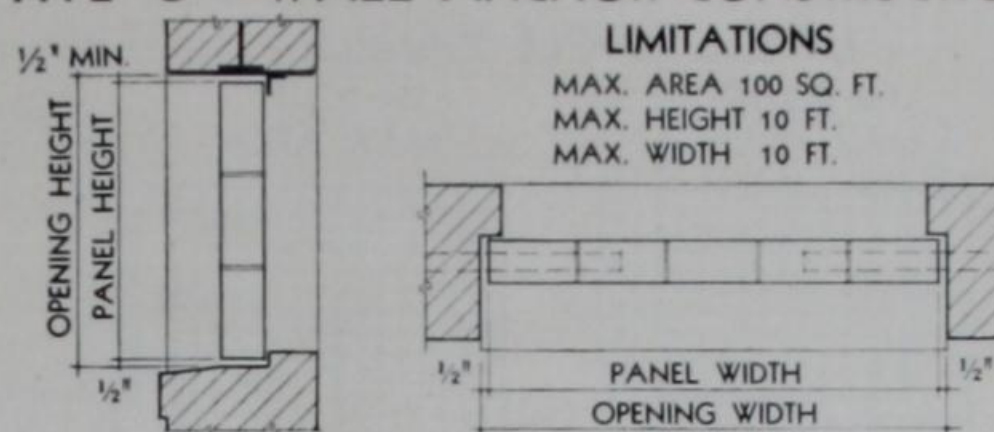


# LAYOUT TABLES FOR PC GLASS BLOCK PANELS

## TYPE "A"—CHASE CONSTRUCTION



## TYPE "B"—WALL ANCHOR CONSTRUCTION



### 5 3/4" SQUARE BLOCKS 1/4" MORTAR JOINTS

### 7 3/4" SQUARE BLOCKS 1/4" MORTAR JOINTS

### 11 3/4" SQUARE BLOCKS 1/4" MORTAR JOINTS

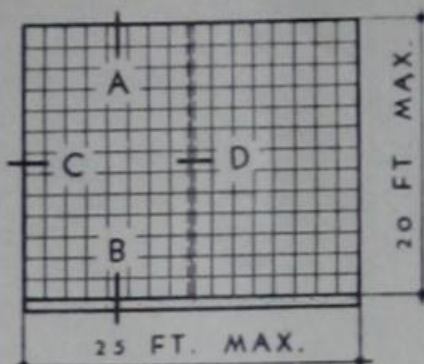
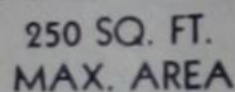
NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"	NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"	NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"
		MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING HEIGHT & WIDTH			MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING HEIGHT & WIDTH			MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING HEIGHT & WIDTH
1	5 3/4"	3 3/4"	7"	6 3/4"	1	7 3/4"	5 3/4"	9"	8 3/4"	1	11 3/4"	9 3/4"	1'-1"	1'-0 3/4"
2	11 3/4"	9 3/4"	1'-1"	1'-0 3/4"	2	1'-3 3/4"	1'-1 3/4"	1'-5"	1'-4 3/4"	2	1'-11 3/4"	1'-9 3/4"	2'-1"	2'-0 3/4"
3	1'-5 3/4"	1'-3 3/4"	1'-7"	1'-6 3/4"	3	1'-11 3/4"	1'-9 3/4"	2'-1"	2'-0 3/4"	3	2'-11 3/4"	2'-9 3/4"	3'-1"	3'-0 3/4"
4	1'-11 3/4"	1'-9 3/4"	2'-1"	2'-0 3/4"	4	2'-7 3/4"	2'-5 3/4"	2'-9"	2'-8 3/4"	4	3'-11 3/4"	3'-9 3/4"	4'-1"	4'-0 3/4"
5	2'-5 3/4"	2'-3 3/4"	2'-7"	2'-6 3/4"	5	3'-3 3/4"	3'-1 3/4"	3'-5"	3'-4 3/4"	5	4'-11 3/4"	4'-9 3/4"	5'-1"	5'-0 3/4"
6	2'-11 3/4"	2'-9 3/4"	3'-1"	3'-0 3/4"	6	3'-11 3/4"	3'-9 3/4"	4'-1"	4'-0 3/4"	6	5'-11 3/4"	5'-9 3/4"	6'-1"	6'-0 3/4"
7	3'-5 3/4"	3'-3 3/4"	3'-7"	3'-6 3/4"	7	4'-7 3/4"	4'-5 3/4"	4'-9"	4'-8 3/4"	7	6'-11 3/4"	6'-9 3/4"	7'-1"	7'-0 3/4"
8	3'-11 3/4"	3'-9 3/4"	4'-1"	4'-0 3/4"	8	5'-3 3/4"	5'-1 3/4"	5'-5"	5'-4 3/4"	8	7'-11 3/4"	7'-9 3/4"	8'-1"	8'-0 3/4"
9	4'-5 3/4"	4'-3 3/4"	4'-7"	4'-6 3/4"	9	5'-11 3/4"	5'-9 3/4"	6'-1"	6'-0 3/4"	9	8'-11 3/4"	8'-9 3/4"	9'-1"	9'-0 3/4"
10	4'-11 3/4"	4'-9 3/4"	5'-1"	5'-0 3/4"	10	6'-7 3/4"	6'-5 3/4"	6'-9"	6'-8 3/4"	10	9'-11 3/4"	9'-9 3/4"	10'-1"	10'-0 3/4"
11	5'-5 3/4"	5'-3 3/4"	5'-7"	5'-6 3/4"	11	7'-3 3/4"	7'-1 3/4"	7'-5"	7'-4 3/4"	11	10'-11 3/4"	10'-9 3/4"	11'-1"	
12	5'-11 3/4"	5'-9 3/4"	6'-1"	6'-0 3/4"	12	7'-11 3/4"	7'-9 3/4"	8'-1"	8'-0 3/4"	12	11'-11 3/4"	11'-9 3/4"	12'-1"	
13	6'-5 3/4"	6'-3 3/4"	6'-7"	6'-6 3/4"	13	8'-7 3/4"	8'-5 3/4"	8'-9"	8'-8 3/4"	13	12'-11 3/4"	12'-9 3/4"	13'-1"	
14	6'-11 3/4"	6'-9 3/4"	7'-1"	7'-0 3/4"	14	9'-3 3/4"	9'-1 3/4"	9'-5"	9'-4 3/4"	14	13'-11 3/4"	13'-9 3/4"	14'-1"	
15	7'-5 3/4"	7'-3 3/4"	7'-7"	7'-6 3/4"	15	9'-11 3/4"	9'-9 3/4"	10'-1"	10'-0 3/4"	15	14'-11 3/4"	14'-9 3/4"	15'-1"	
16	7'-11 3/4"	7'-9 3/4"	8'-1"	8'-0 3/4"	16	10'-7 3/4"	10'-5 3/4"	10'-9"		16	15'-11 3/4"	15'-9 3/4"	16'-1"	
17	8'-5 3/4"	8'-3 3/4"	8'-7"	8'-6 3/4"	17	11'-3 3/4"	11'-1 3/4"	11'-5"		17	16'-11 3/4"	16'-9 3/4"	17'-1"	
18	8'-11 3/4"	8'-9 3/4"	9'-1"	9'-0 3/4"	18	11'-11 3/4"	11'-9 3/4"	12'-1"		18	17'-11 3/4"	17'-9 3/4"	18'-1"	
19	9'-5 3/4"	9'-3 3/4"	9'-7"	9'-6 3/4"	19	12'-7 3/4"	12'-5 3/4"	12'-9"		19	18'-11 3/4"	18'-9 3/4"	19'-1"	
20	9'-11 3/4"	9'-9 3/4"	10'-1"	10'-0 3/4"	20	13'-3 3/4"	13'-1 3/4"	13'-5"		20	19'-11 3/4"	19'-9 3/4"	20'-1"	
21	10'-5 3/4"	10'-3 3/4"	10'-7"		21	13'-11 3/4"	13'-9 3/4"	14'-1"		21	20'-11 3/4"	20'-9 3/4"		
22	10'-11 3/4"	10'-9 3/4"	11'-1"		22	14'-7 3/4"	14'-5 3/4"	14'-9"		22	21'-11 3/4"	21'-9 3/4"		
23	11'-5 3/4"	11'-3 3/4"	11'-7"		23	15'-3 3/4"	15'-1 3/4"	15'-5"		23	22'-11 3/4"	22'-9 3/4"		
24	11'-11 3/4"	11'-9 3/4"	12'-1"		24	15'-11 3/4"	15'-9 3/4"	16'-1"		24	23'-11 3/4"	23'-9 3/4"		
25	12'-5 3/4"	12'-3 3/4"	12'-7"		25	16'-7 3/4"	16'-5 3/4"	16'-9"		25	24'-11 3/4"	24'-9 3/4"		
26	12'-11 3/4"	12'-9 3/4"	13'-1"		26	17'-3 3/4"	17'-1 3/4"	17'-5"						
27	13'-5 3/4"	13'-3 3/4"	13'-7"		27	17'-11 3/4"	17'-9 3/4"	18'-1"						
28	13'-11 3/4"	13'-9 3/4"	14'-1"		28	18'-7 3/4"	18'-5 3/4"	18'-9"						
29	14'-5 3/4"	14'-3 3/4"	14'-7"		29	19'-3 3/4"	19'-1 3/4"	19'-5"						
30	14'-11 3/4"	14'-9 3/4"	15'-1"		30	19'-11 3/4"	19'-9 3/4"	20'-1"						
31	15'-5 3/4"	15'-3 3/4"	15'-7"		31	20'-7 3/4"	20'-5 3/4"							
32	15'-11 3/4"	15'-9 3/4"	16'-1"		32	21'-3 3/4"	21'-1 3/4"							
33	16'-5 3/4"	16'-3 3/4"	16'-7"		33	21'-11 3/4"	21'-9 3/4"							
34	16'-11 3/4"	16'-9 3/4"	17'-1"		34	22'-7 3/4"	22'-5 3/4"							
35	17'-5 3/4"	17'-3 3/4"	17'-7"		35	23'-3 3/4"	23'-1 3/4"							
36	17'-11 3/4"	17'-9 3/4"	18'-1"		36	23'-11 3/4"	23'-9 3/4"							
37	18'-5 3/4"	18'-3 3/4"	18'-7"		37	24'-7 3/4"	24'-5 3/4"							
38	18'-11 3/4"	18'-9 3/4"	19'-1"		38	25'-3 3/4"	25'-1 3/4"							
39	19'-5 3/4"	19'-3 3/4"	19'-7"											
40	19'-11 3/4"	19'-9 3/4"	20'-1"											
41	20'-5 3/4"	20'-3 3/4"												
42	20'-11 3/4"	20'-9 3/4"												
43	21'-5 3/4"	21'-3 3/4"												
44	21'-11 3/4"	21'-9 3/4"												
45	22'-5 3/4"	22'-3 3/4"												
46	22'-11 3/4"	22'-9 3/4"												
47	23'-5 3/4"	23'-3 3/4"												
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50	24'-11 3/4"	24'-9 3/4"												



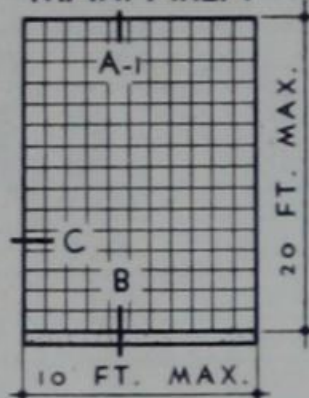
# PC Glass Blocks

Structural members shown are to indicate principal

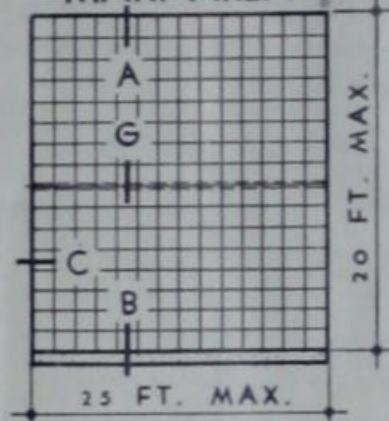
144 SQ. FT.  
MAX. AREA



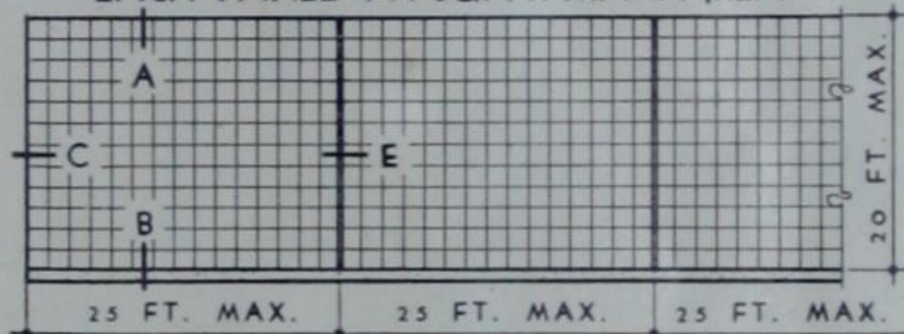
144 SQ. FT.  
MAX. AREA



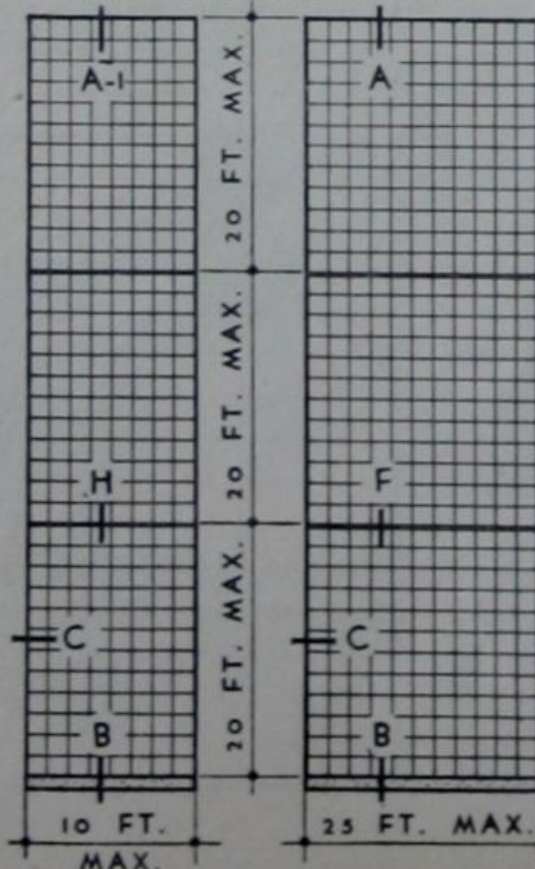
250 SQ. FT.  
MAX. AREA



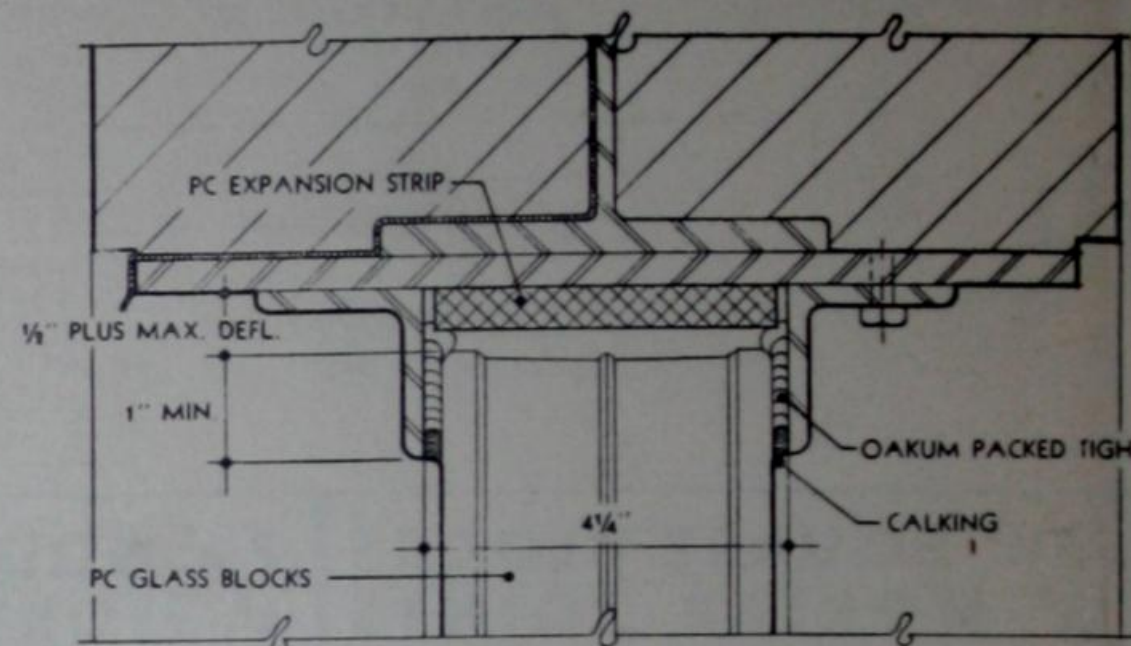
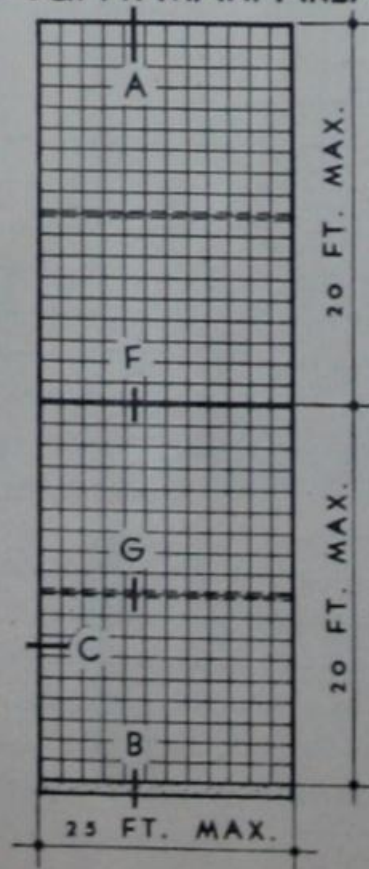
EACH PANEL 144 SQ. FT. MAX. AREA



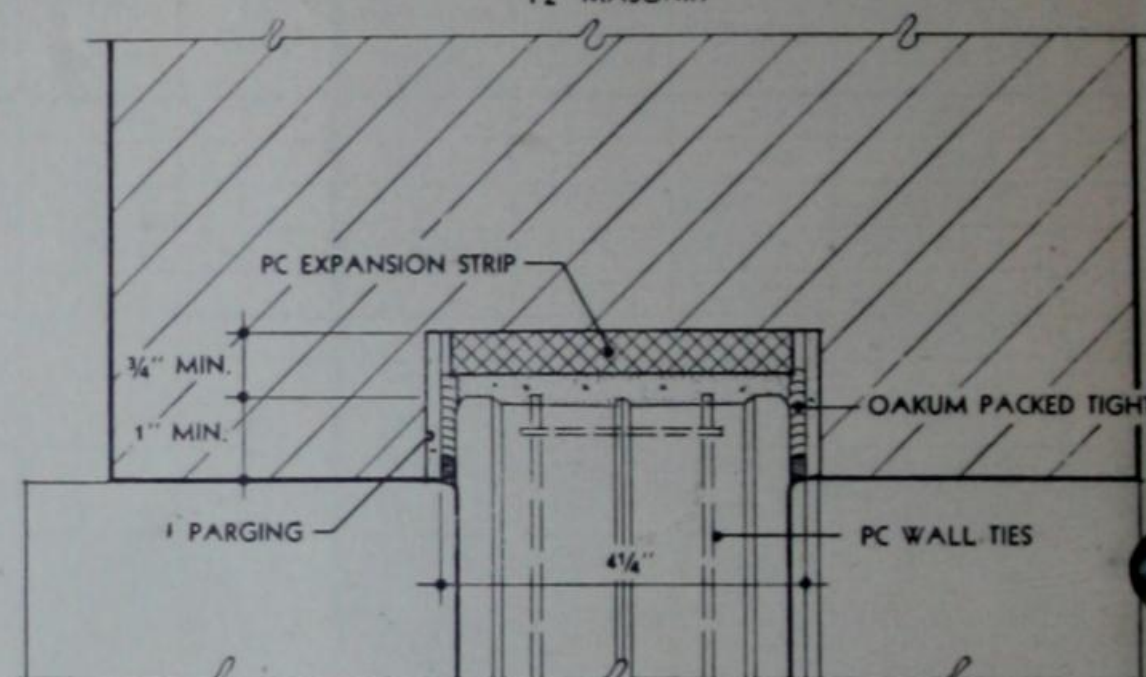
EACH PANEL  
144 SQ. FT. MAX. AREA



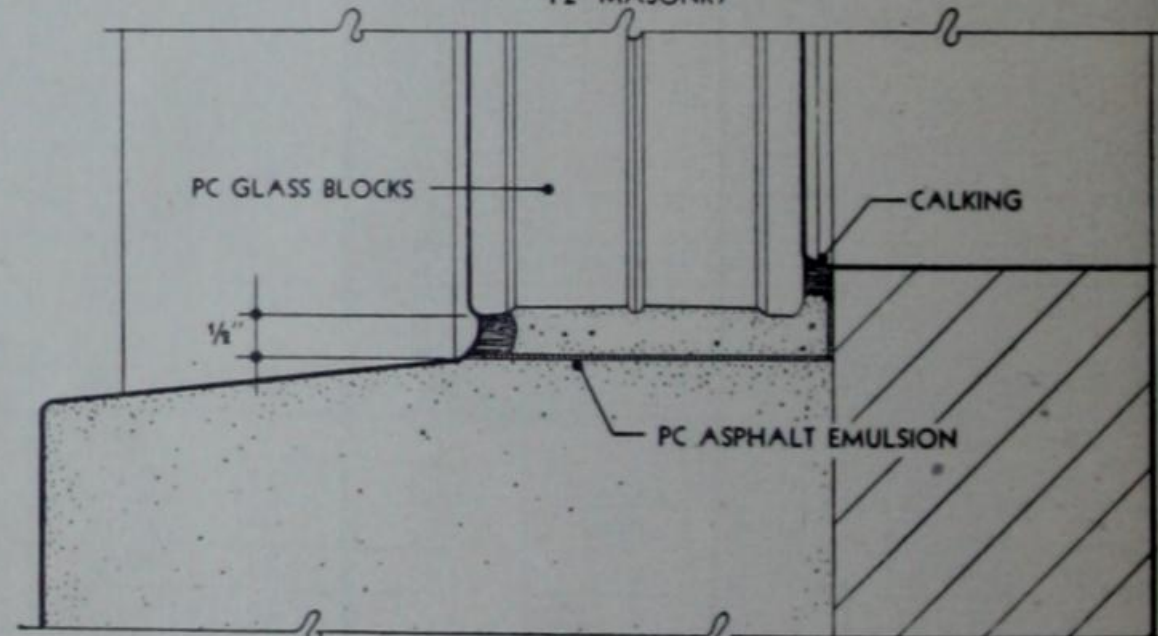
EACH PANEL  
250 SQ. FT. MAX. AREA



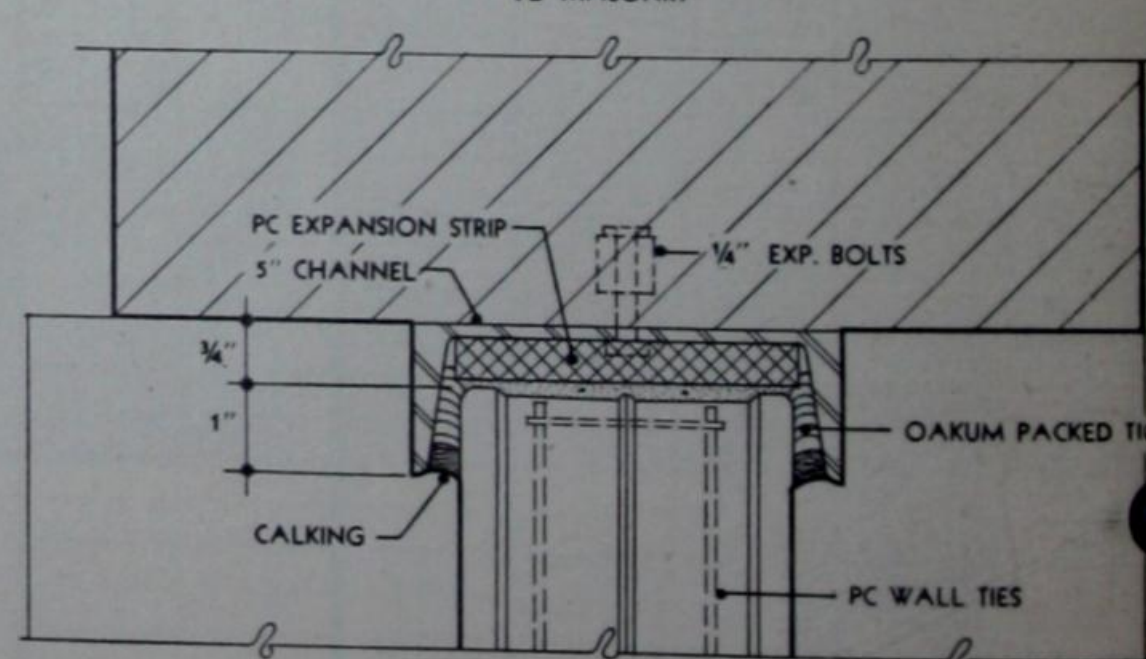
SECTION "A"  
12" MASONRY



SECTION "C"  
12" MASONRY



SECTION "B"  
12" MASONRY



ALTERNATE SECTION "C"  
8" OR 12" MASONRY

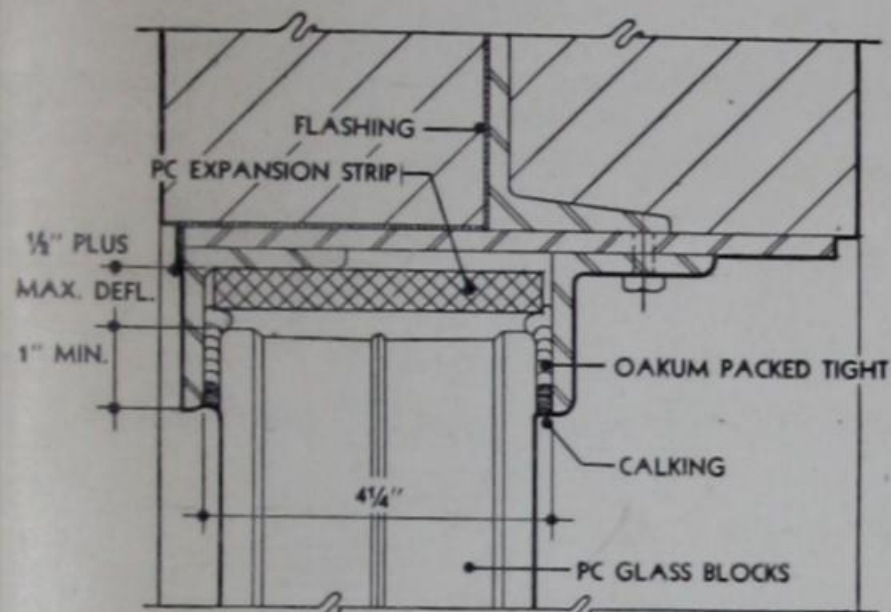
SCALE 3" = 1'-0"



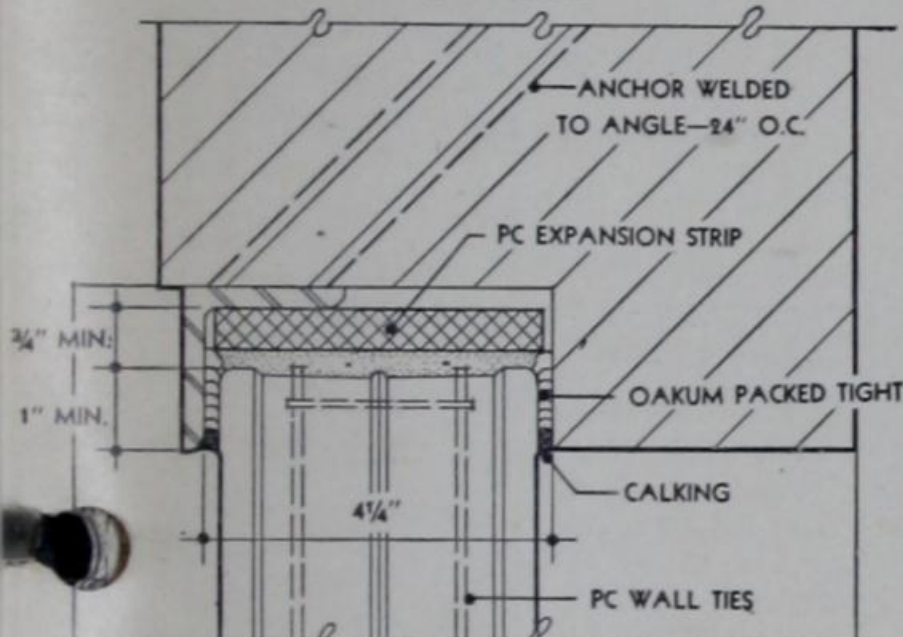
# Installation Details

construction. Sizes must be calculated for loads applied.

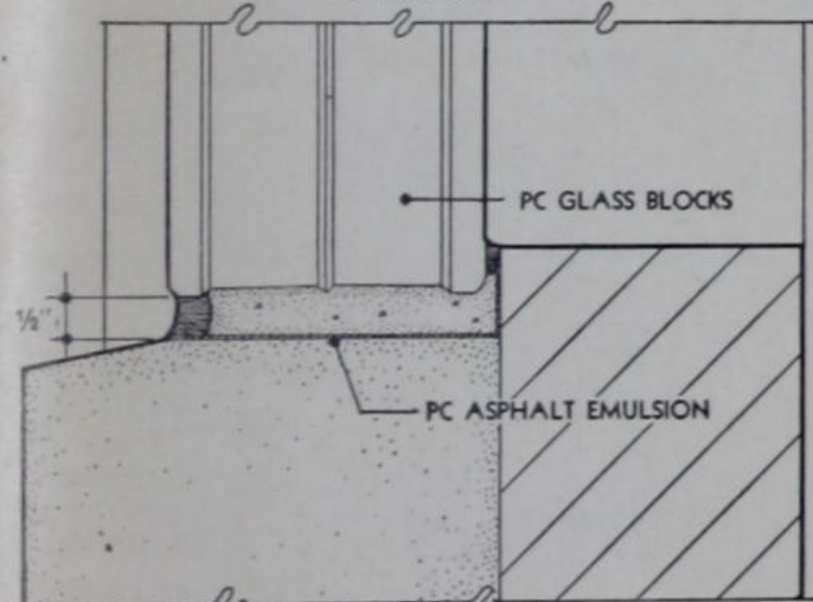
Information shown on these sheets is not intended to conflict with any local building code requirements.



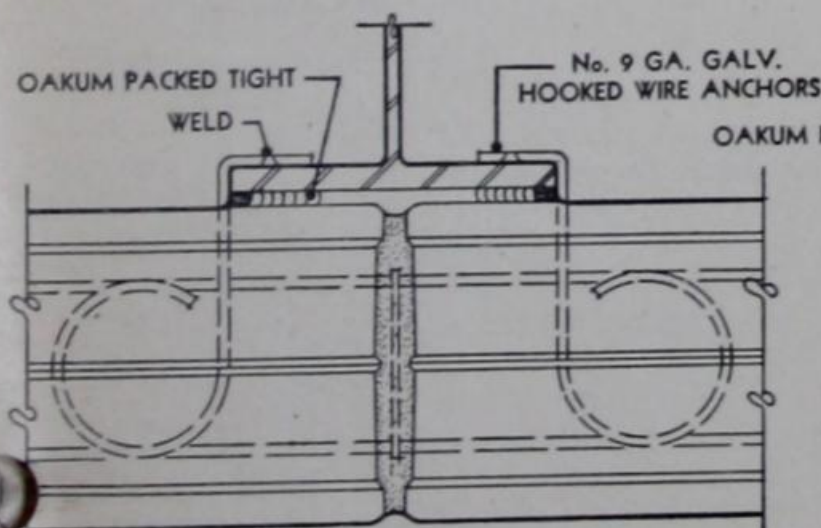
SECTION "A"  
8" MASONRY



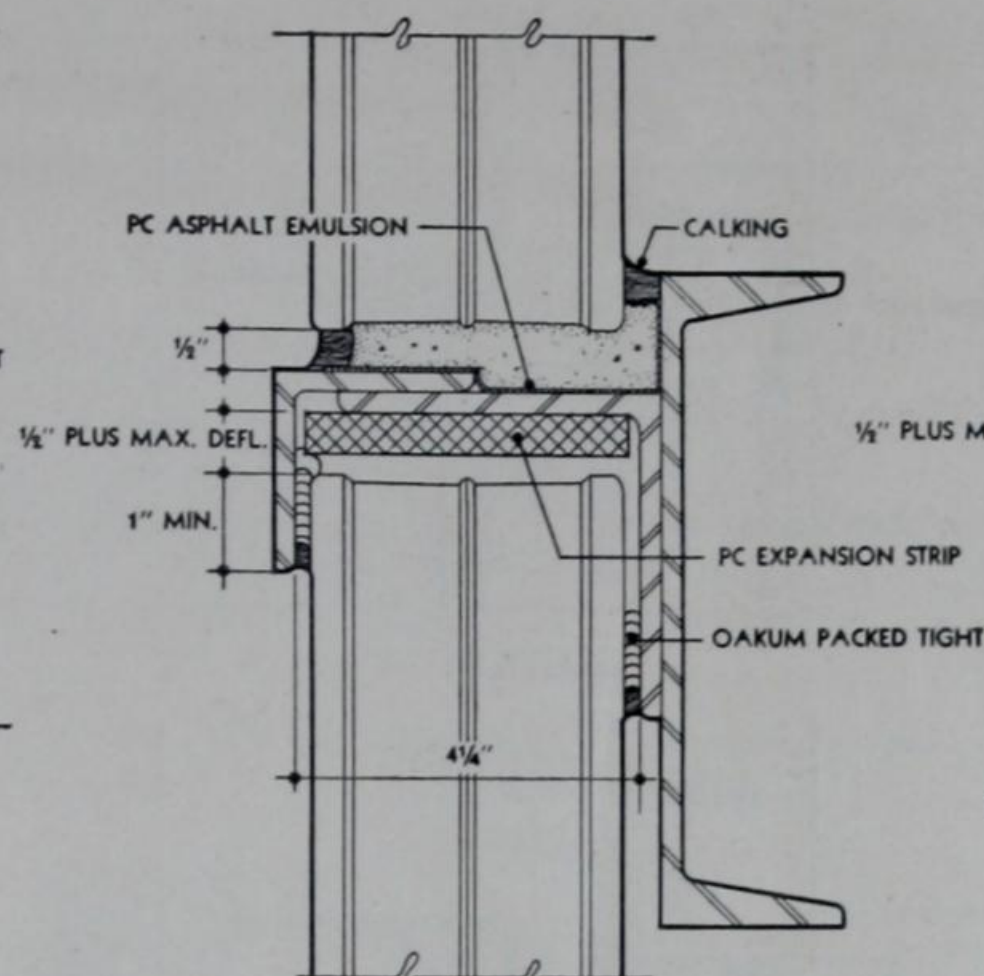
SECTION "C"  
8" MASONRY



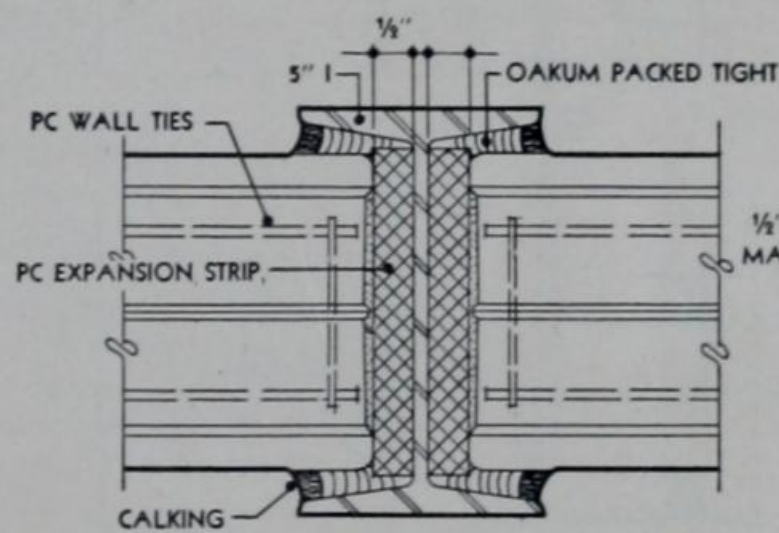
SECTION "B"  
8" MASONRY



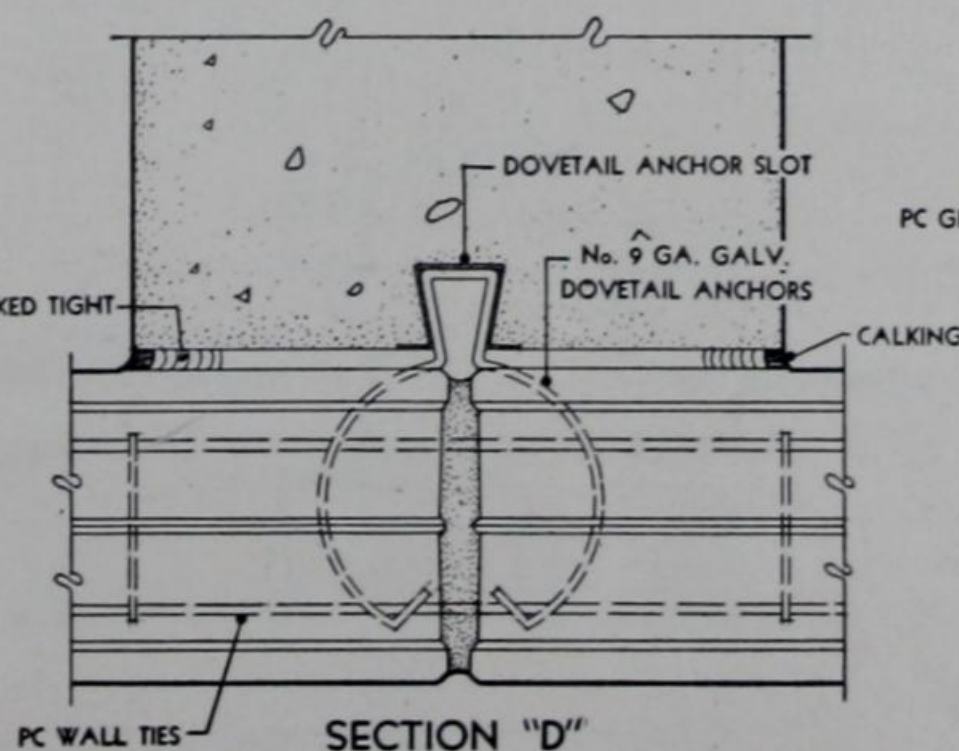
SECTION "D"



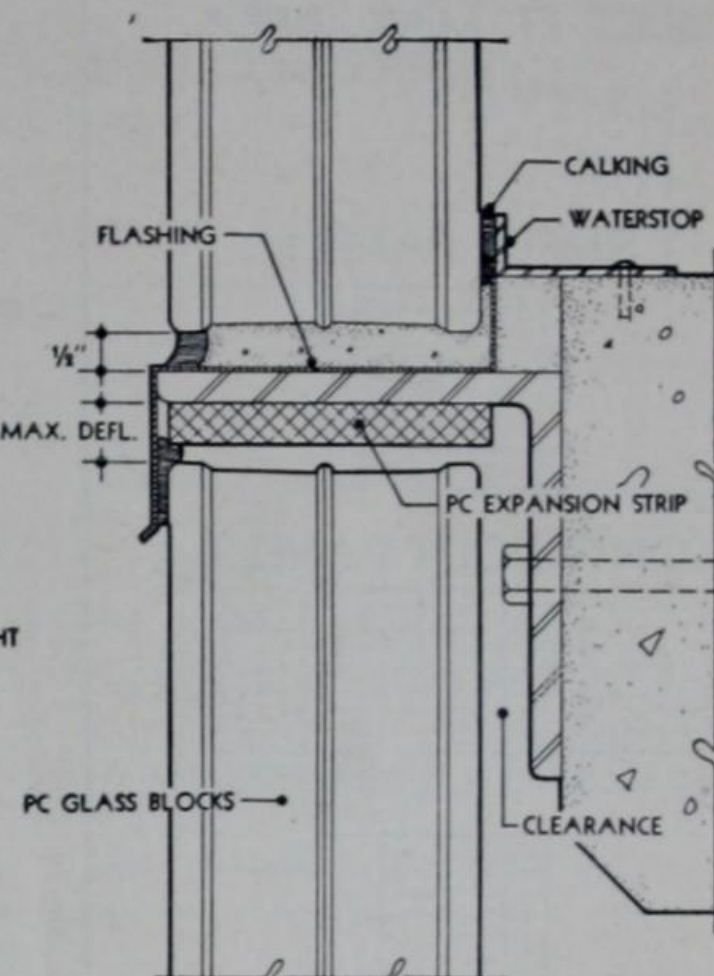
SECTION "F"



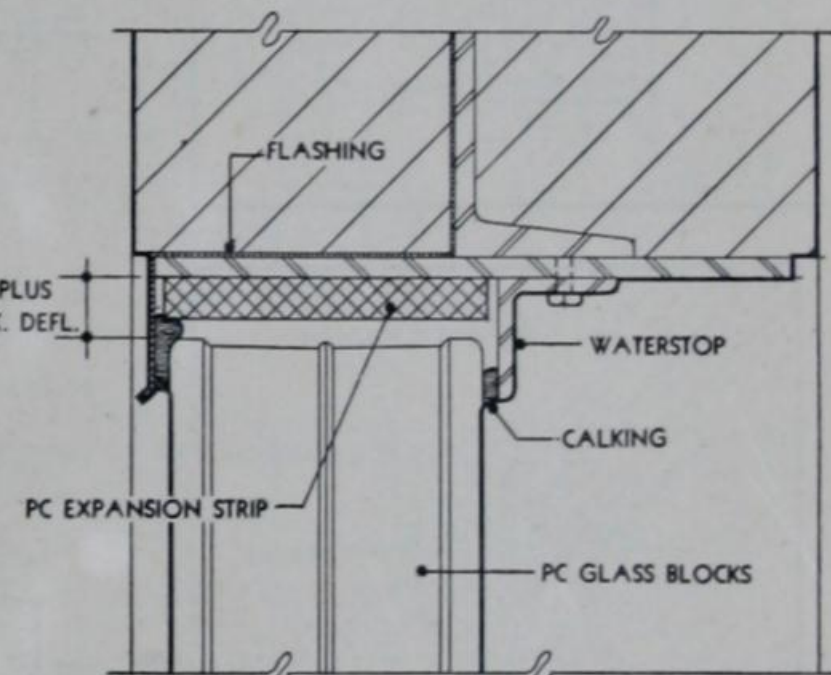
SECTION "E"



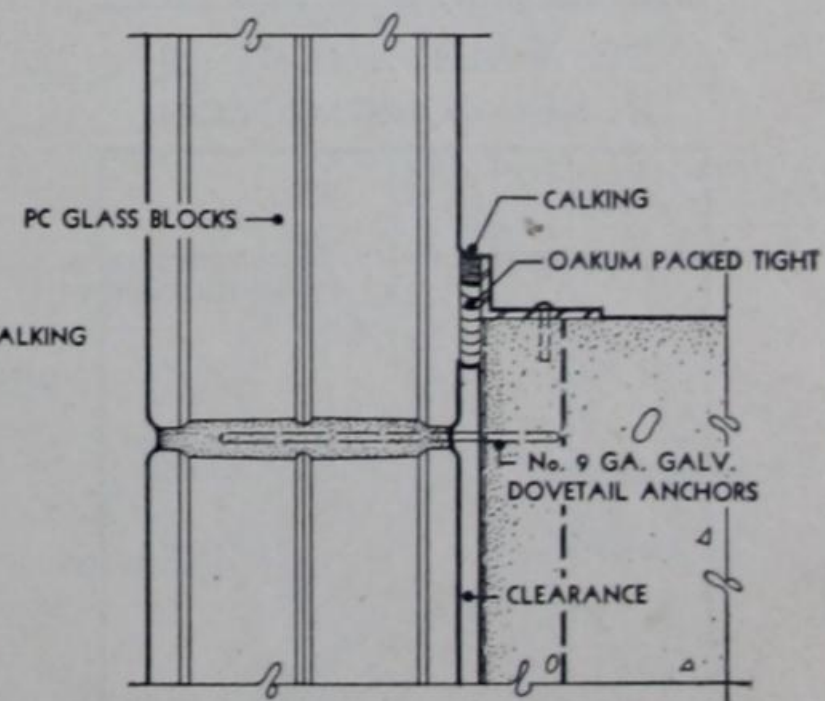
SECTION "D"



SECTION "H"



SECTION "A-I"



SECTION "G"

SCALE 3"=1'-0"



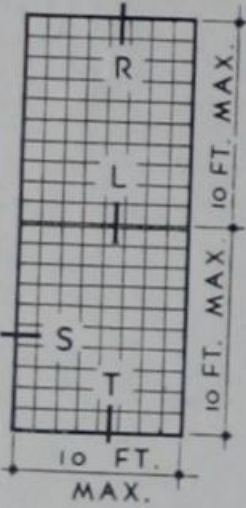
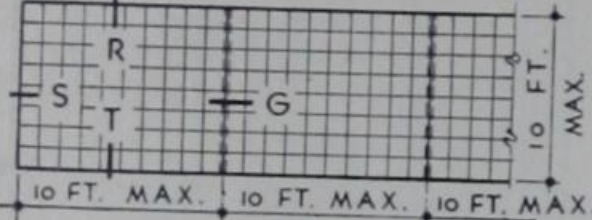
# PC Glass Blocks — INSTALLATION DETAILS FOR SMALL EXTERIOR PANELS

SMALL EXTERIOR PANELS  
100 SQ. FT. MAX. AREA

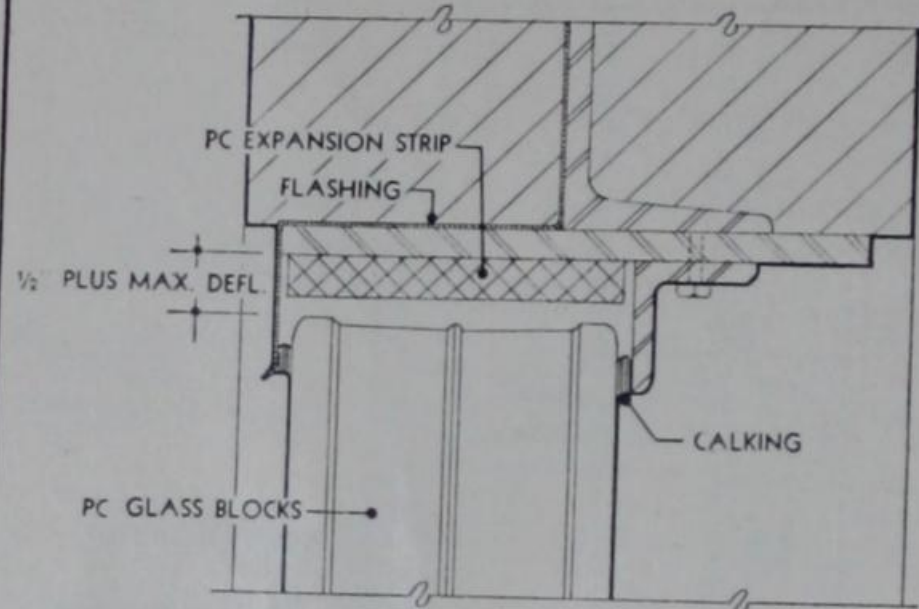
## SIMPLE PANELS



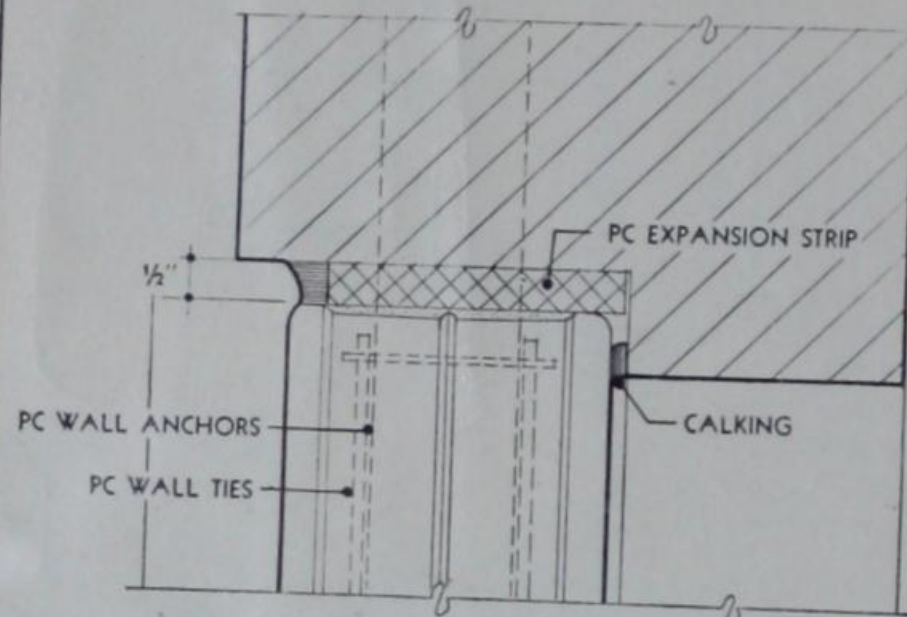
## CONTINUOUS PANELS



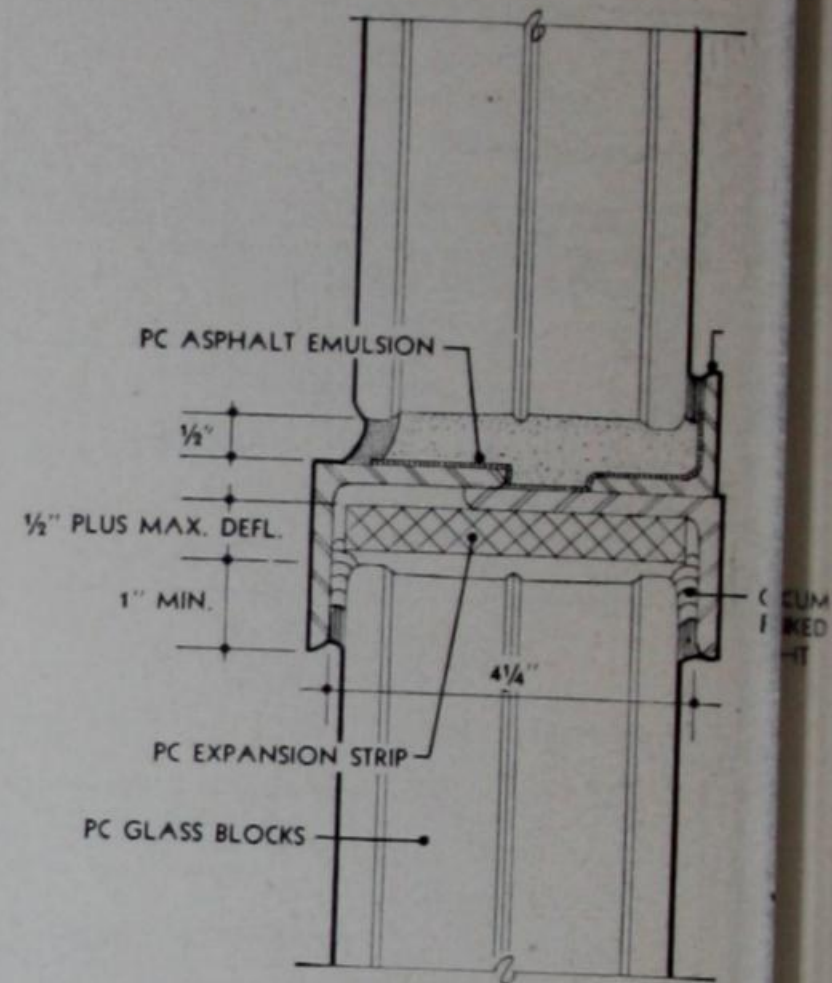
Wall Anchors providing lateral support for glass block panels are restricted only by building code requirements and the discretion of the Architect. Where Wall Anchors are forbidden, Chase Construction shall be used.



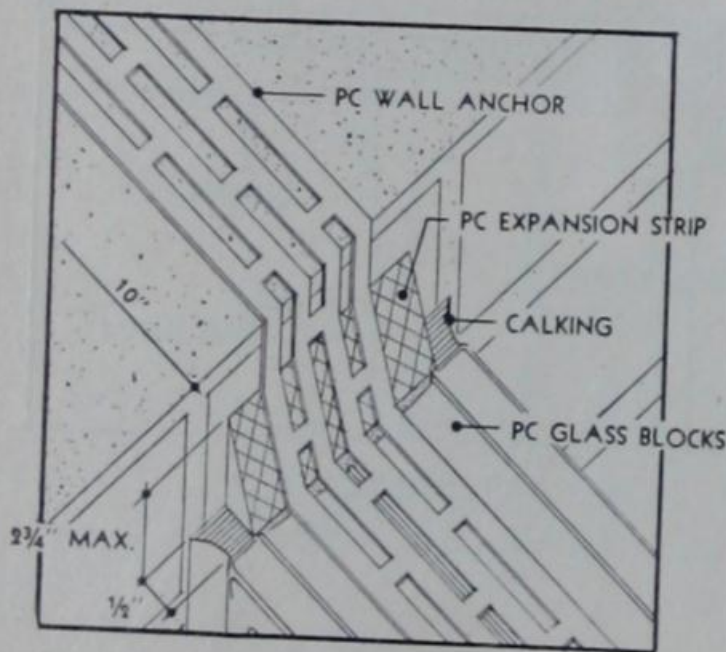
SECTION "R"



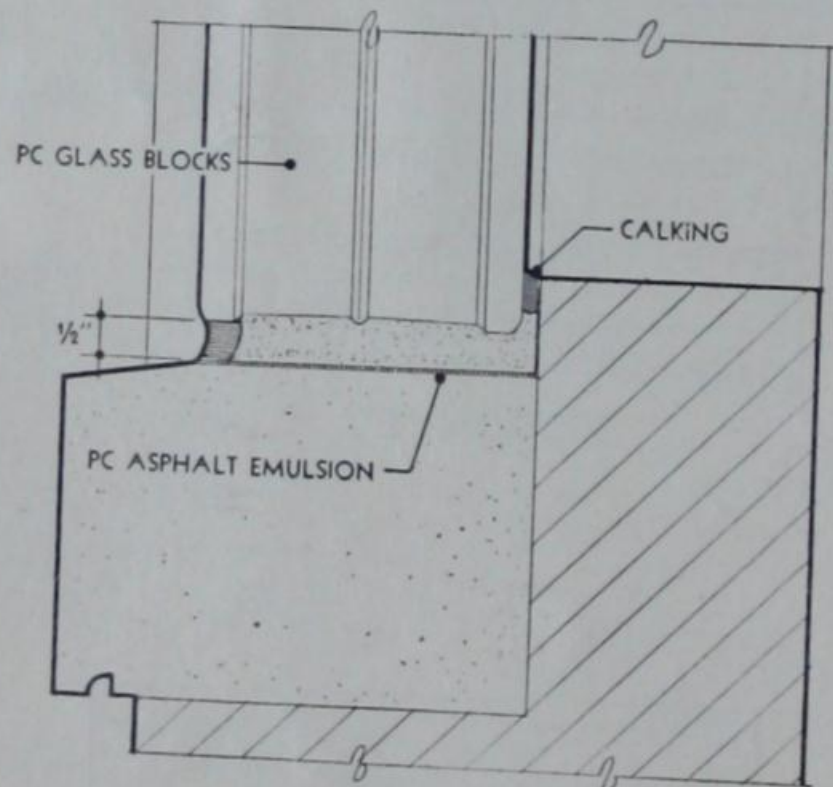
SECTION "S"



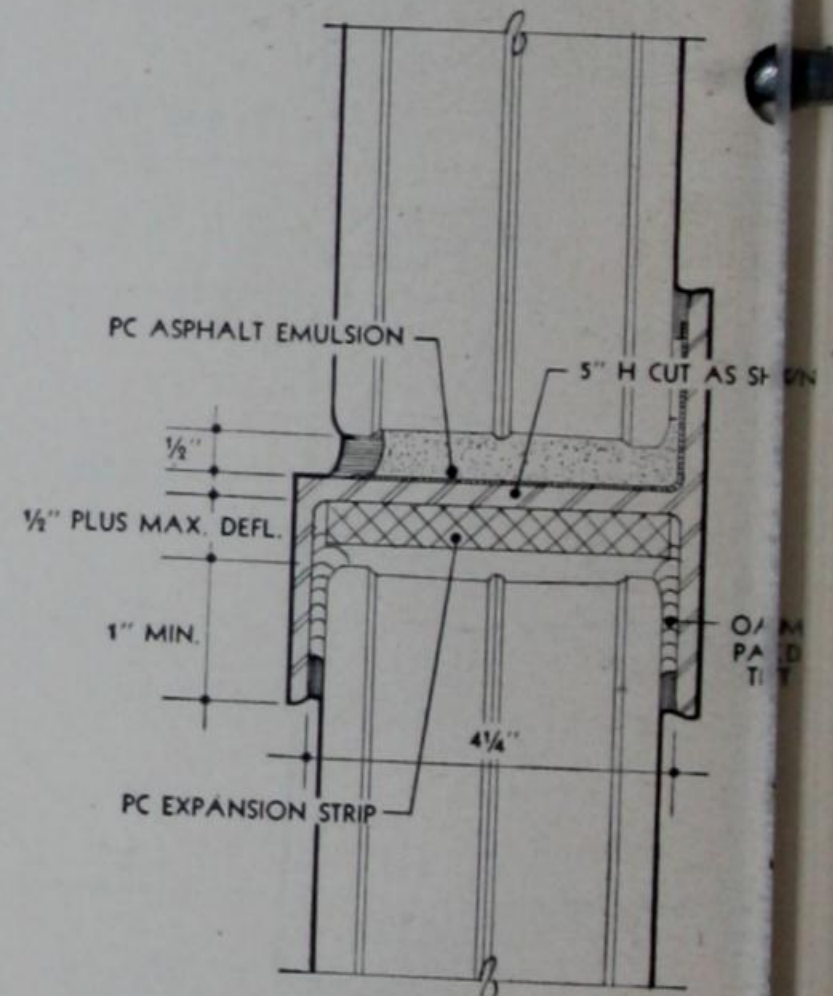
SECTION "L"



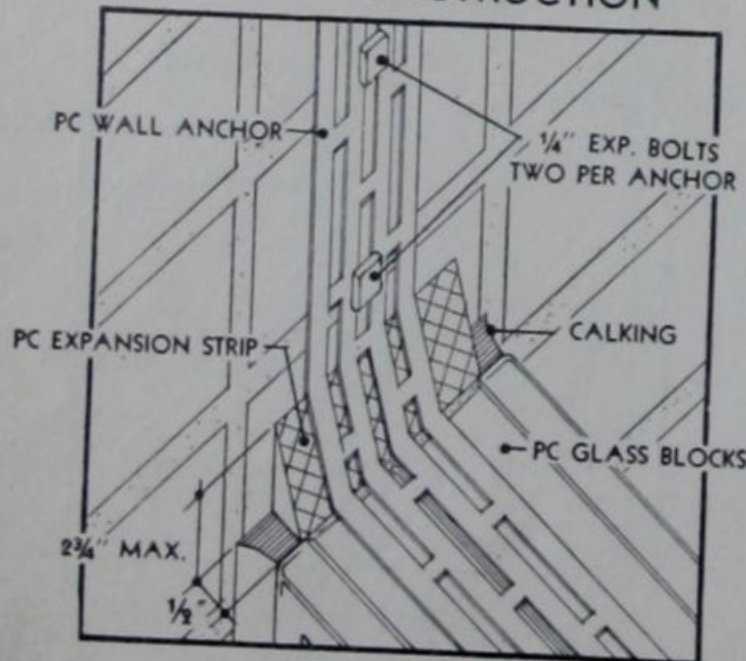
PC WALL ANCHORS  
IN NEW CONSTRUCTION



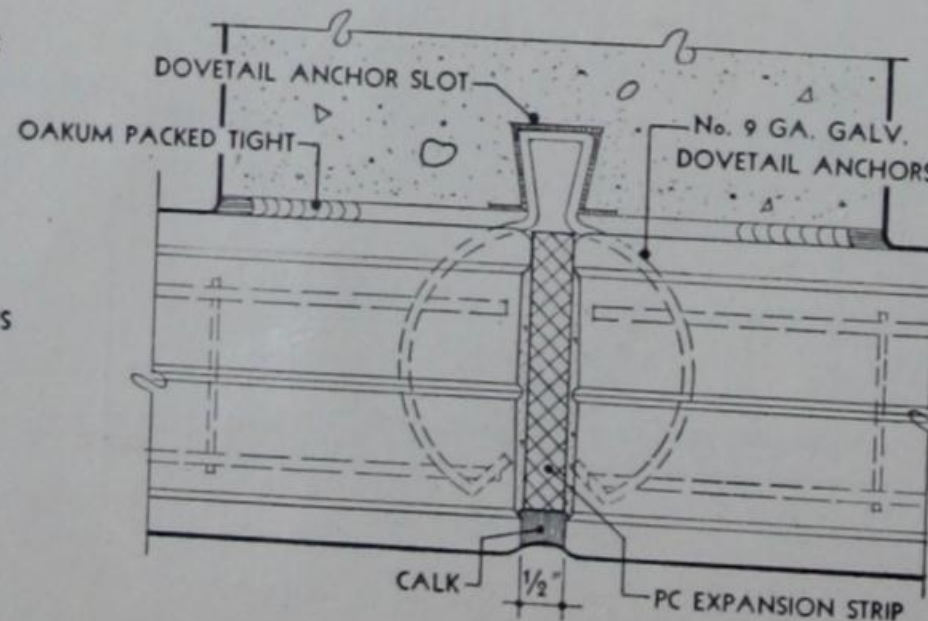
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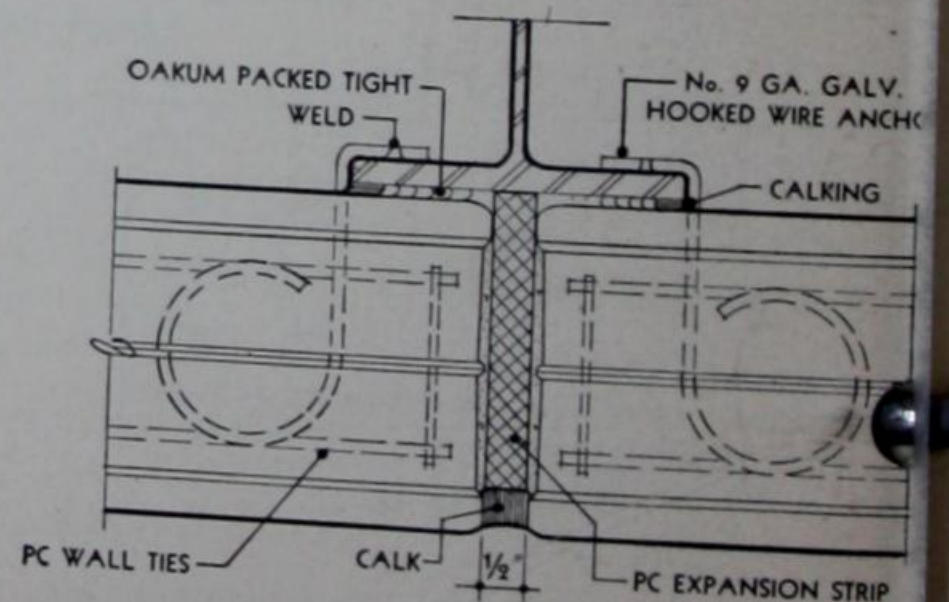
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PC WALL ANCHORS IN  
EXISTING CONSTRUCTION



SECTION "G"



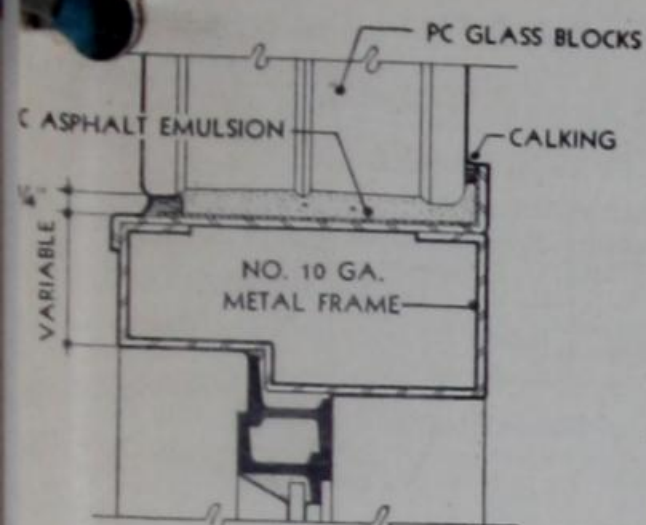
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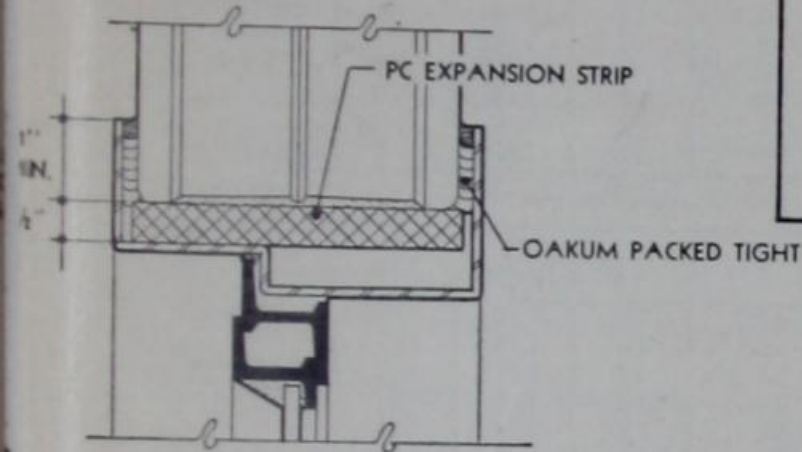


# PC Glass Blocks

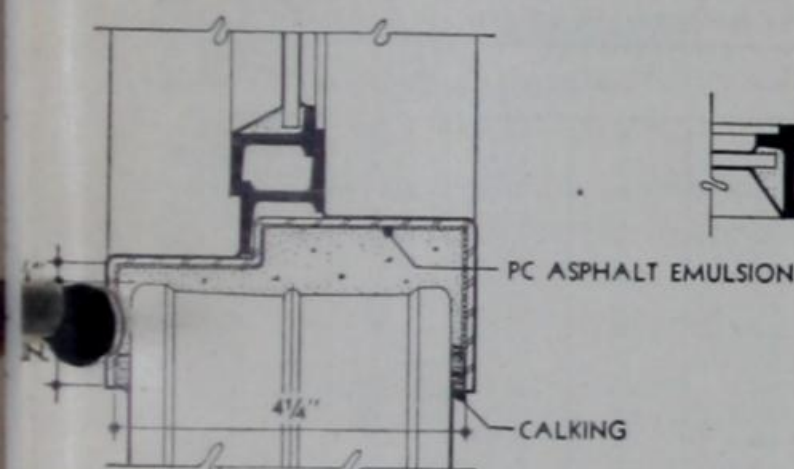
## — INSTALLATION DETAILS FOR SASH AND GLASS BLOCK COMBINATIONS



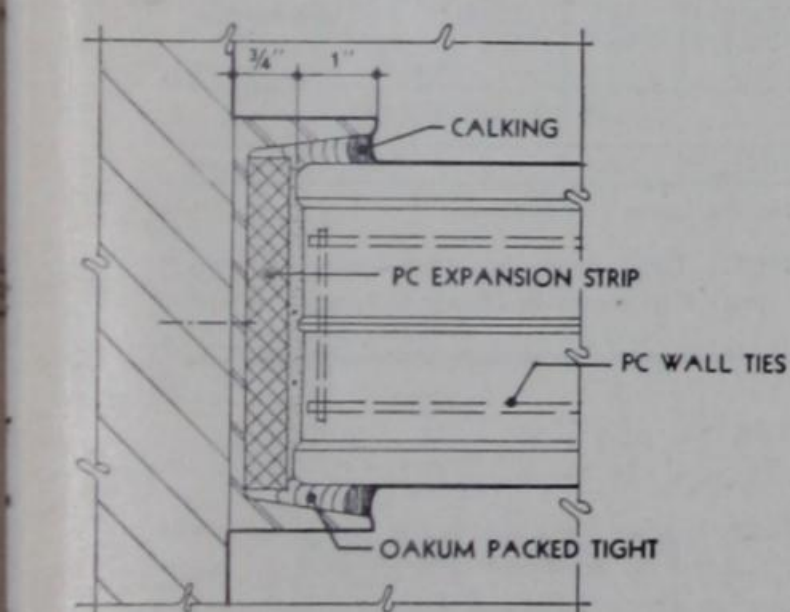
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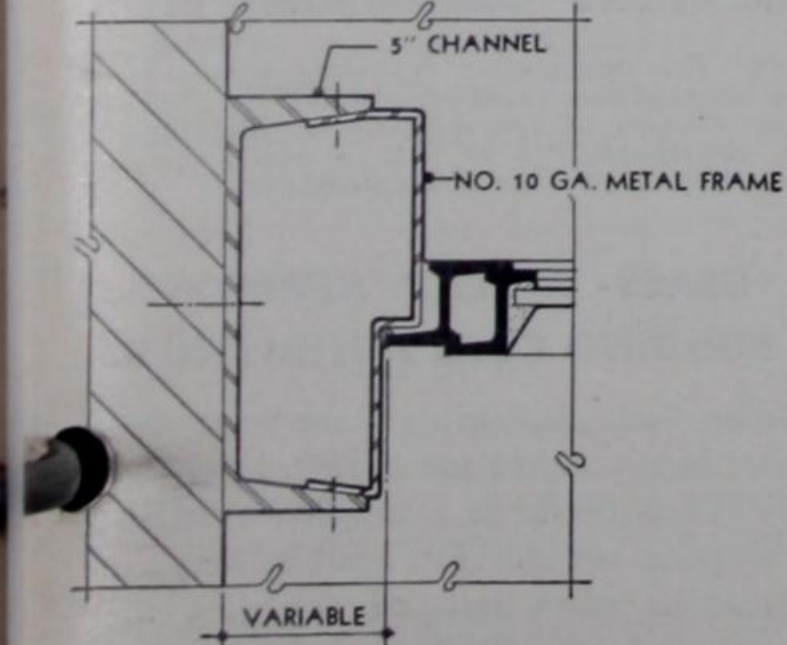
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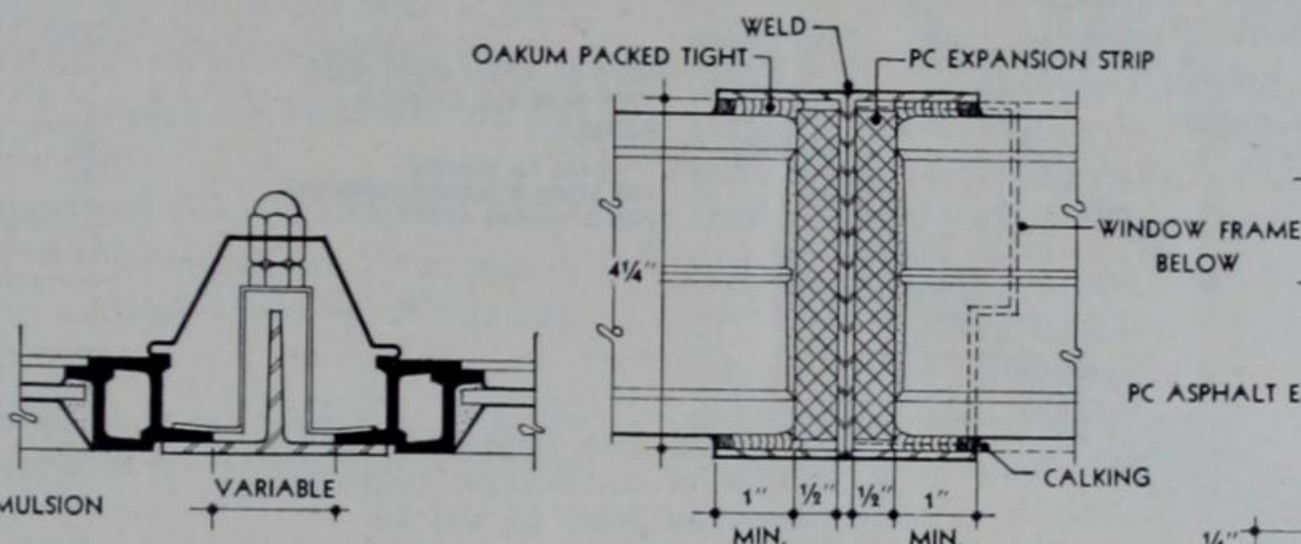
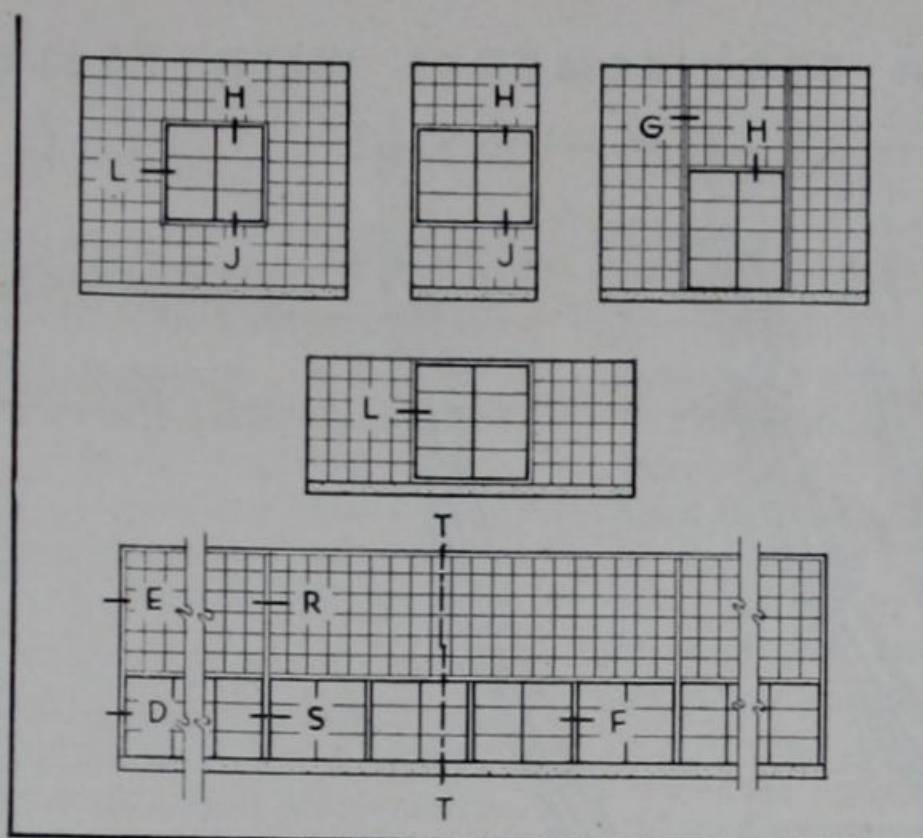
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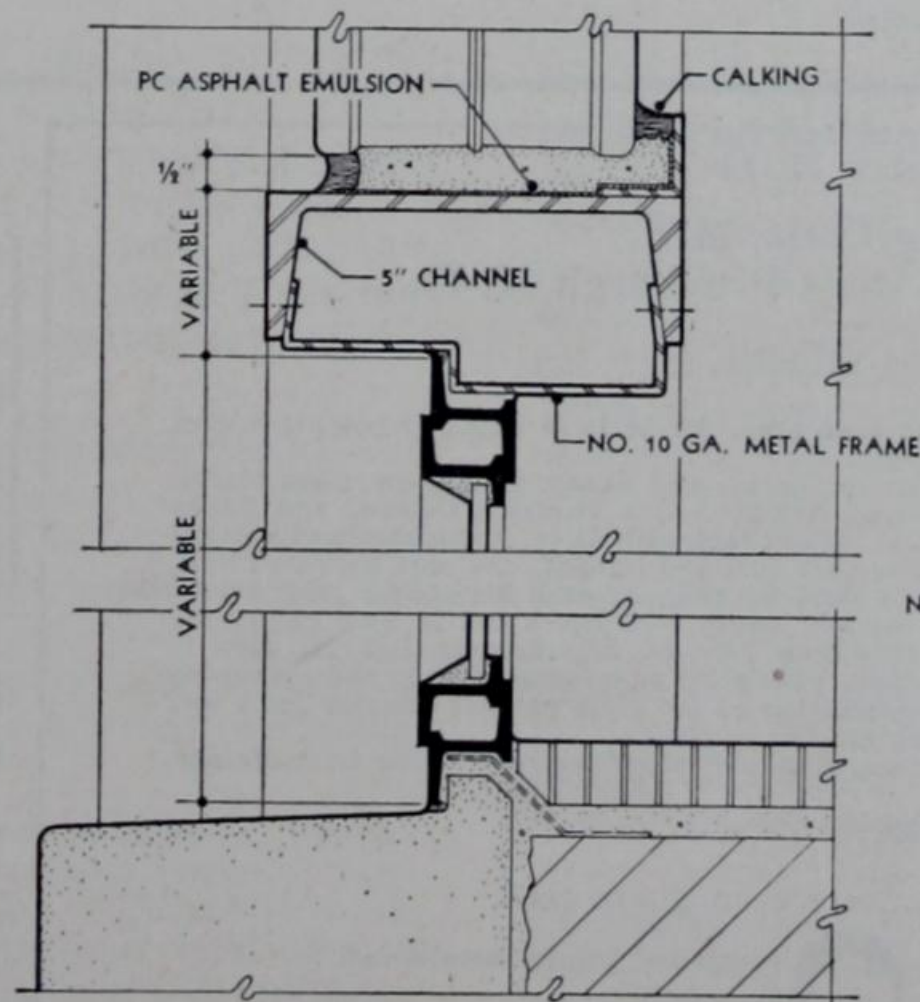
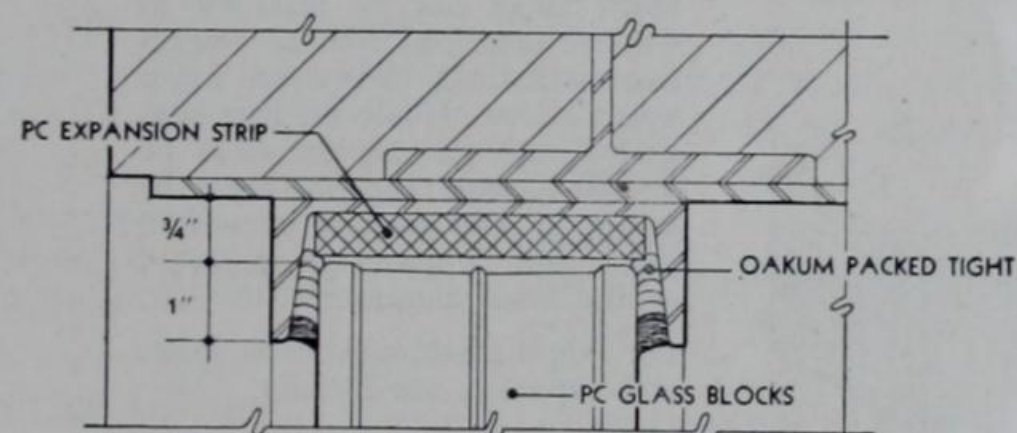


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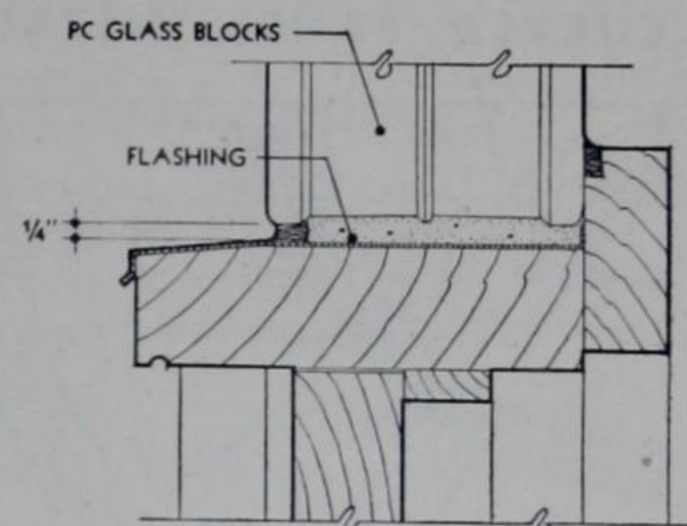
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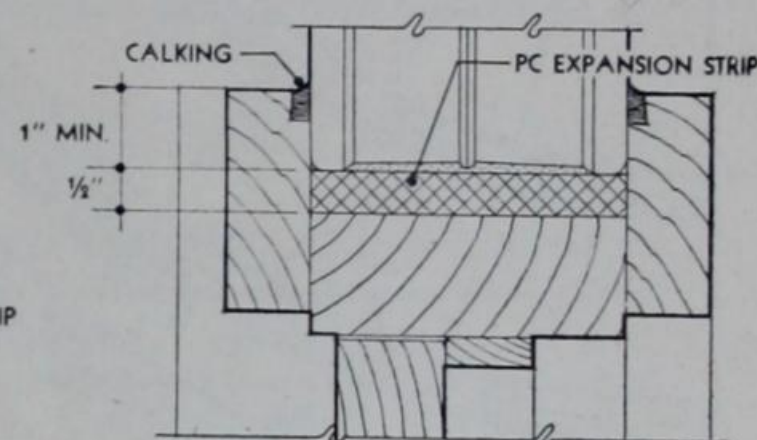


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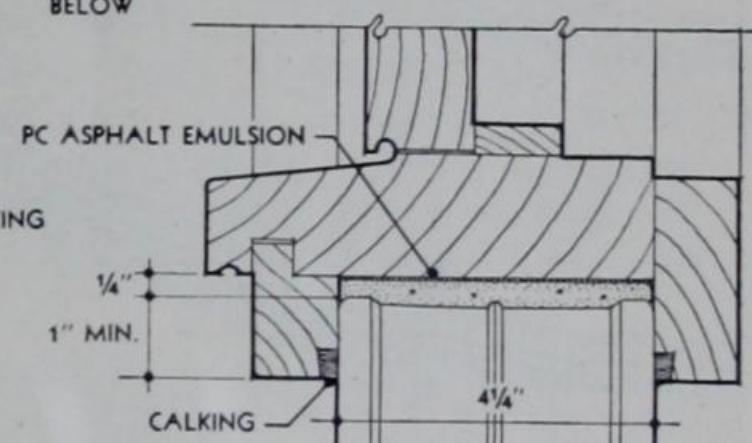
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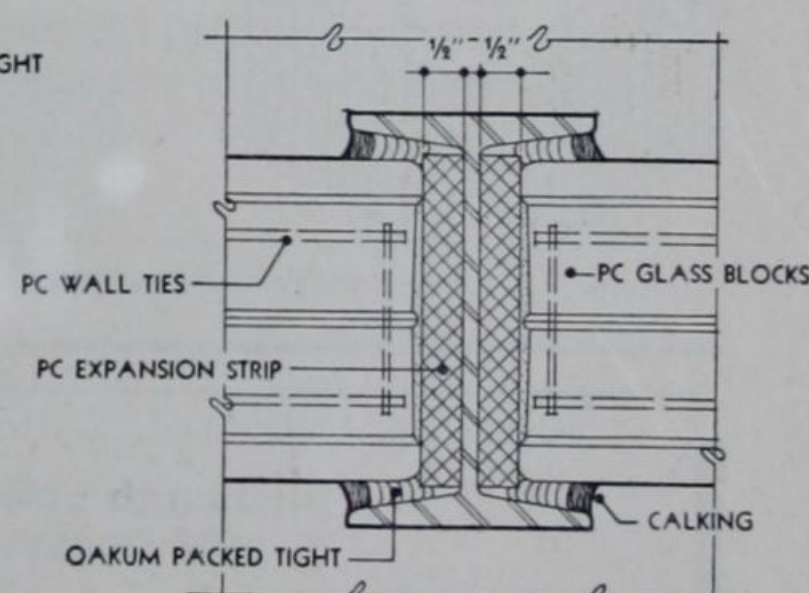
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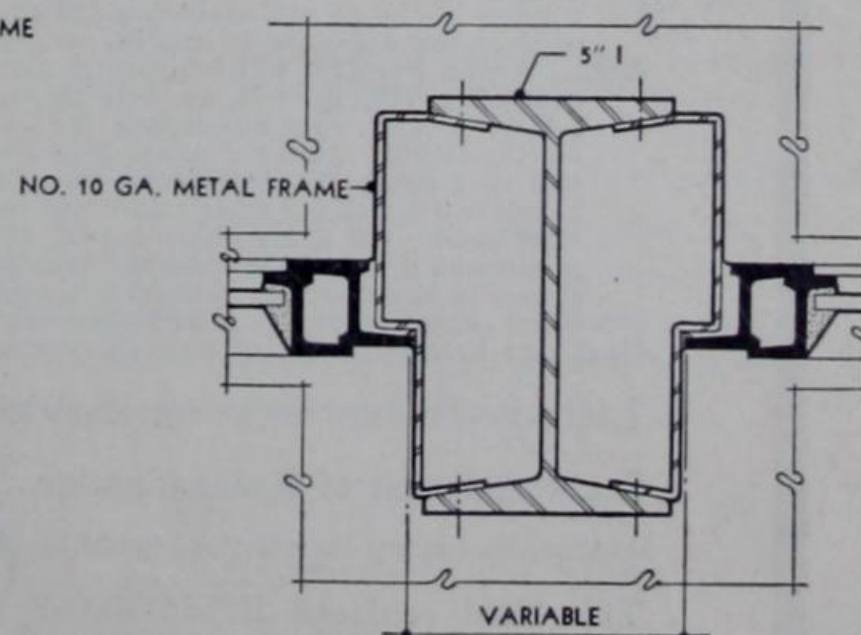
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SECTION "J"



SECTION "R"

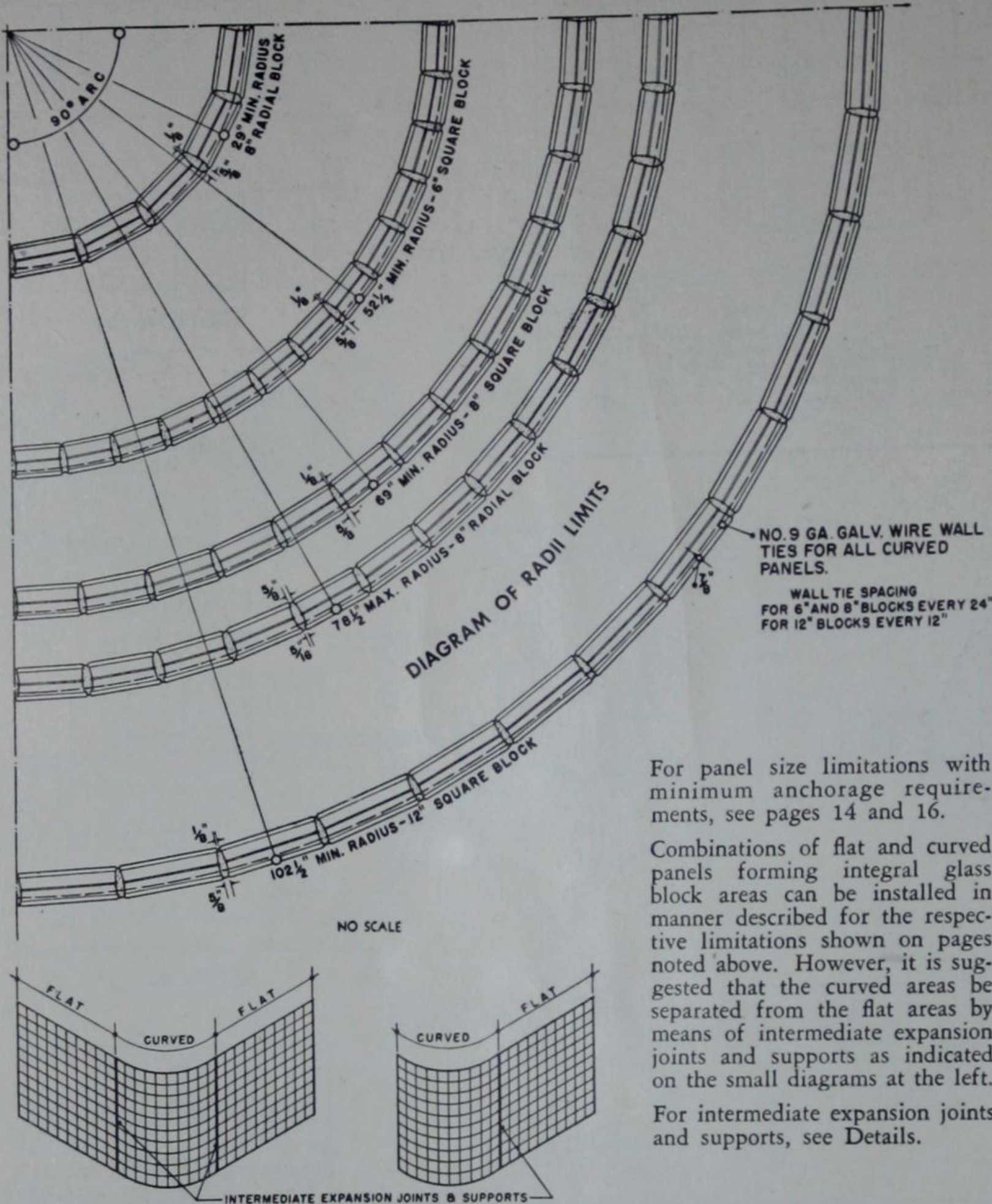


SECTION "S"



# PC Glass Blocks — INSTALLATION DETAILS

## CURVED PANEL INSTALLATION REQUIREMENTS WITH TABLE OF RADII LIMITS



For panel size limitations with minimum anchorage requirements, see pages 14 and 16.

Combinations of flat and curved panels forming integral glass block areas can be installed in manner described for the respective limitations shown on pages noted above. However, it is suggested that the curved areas be separated from the flat areas by means of intermediate expansion joints and supports as indicated on the small diagrams at the left.

For intermediate expansion joints and supports, see Details.

TABLE OF RADII LIMITS FOR CURVED PANELS

Outside Radius Inches	Number of Block in 90° Circular Arc	Joint Thickness in inches		Remarks
		Inside	Outside	

6" SQUARE BLOCK

52-1/2	13	1/8	5/8	Minimum
56-1/4	14	1/8	9/16	
56-3/4	14	3/16	5/8	
60	15	1/8	5/16	
61	15	3/16	5/8	
63-3/4	16	1/8	1/2	
65	16	1/4	5/8	
67-1/2	17	1/8	1/2	
69	17	1/4	5/8	
71-1/4	18	1/8	7/16	
73	18	5/16	5/8	

No Maximum Limitations.

8" SQUARE BLOCK

69	13	1/8	5/8	Minimum
74	14	1/8	9/16	
74-3/4	14	3/16	5/8	
79	15	1/8	1/2	
80	15	1/4	5/8	
84	16	1/8	1/2	
85-1/4	16	1/4	5/8	

No Maximum Limitations.

8" RADIAL BLOCK

29	5	1/8	5/8	Minimum
34	6	1/8	3/8	
34-3/4	6	3/8	5/8	
39	7	1/8	1/4	
40-3/4	7	1/2	5/8	
44	8	1/8	1/8	
46-1/2	8	5/8	5/8	
49-1/2	9	3/16	1/8	
51-3/4	9	5/8	9/16	
55	10	1/4	1/8	
57-1/4	10	5/8	1/2	
60-1/2	11	5/16	1/8	
62-1/2	11	5/8	7/16	
66	12	3/8	1/8	
67-3/4	12	5/8	3/8	
71-1/2	13	3/8	1/8	
73-1/4	13	5/8	5/16	
76-3/4	14	7/16	1/8 Use Square	
78-1/2	14	5/8	5/16 Block for larger radii	

12" SQUARE BLOCK

102-1/2	13	1/8	5/8	Minimum
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No Maximum Limitations.

NOTE: Radii given to closest quarter inch; joint thicknesses to closest sixteenth inch.

Guide No. 40 UM2.6.5. December 11, 1945

File R2556.

Pittsburgh Corning Corp., Mfr.,  
632 Duquesne Way, Pittsburgh 22, Pa.

Glass Blocks.

For window openings not exceeding 120 sq ft in area, nor 12 ft in width or height, subject to light fire exposure (Class F openings).

Argus, Argus Parallel, Bristol, Druid, Decora, Essex, and Saxon PC hollow glass blocks, nominally 7-3/4 by 7-3/4 by 3-7/8 in., and Argus, Argus Parallel, Decora, and Saxon 5-3/4 by 5-3/4 in. face dimensions, 3-7/8 in. thick; laid with 1/4-in. horizontal and vertical mortar joints; mortar consisting of one part portland cement, one part hydrated lime, and four parts No. 1 screened torpedo sand by volume; each horizontal joint except between the two top rows reinforced for full length with No. 9 and 14 Bwg galvanized wire mesh; the glass block panels extending 1-1/4 in. into grooves 2-1/4 in. deep in jambs and lintel of the masonry openings, with glass or mineral wool in the remaining spaces in the grooves, to provide for expansion of the glass panels; exterior jamb and lintel edges caulked with waterproofing mastic.

Marking: Letters "PC", pattern designation, size and manufacturer's name on container.

Listed—Reexamination Service.

See description of Reexamination Service on guide card.

Authorities having jurisdiction should be consulted before installation.

This card replaces R2556 dated Jan. 2, 1941.

This card is issued by Underwriters' Laboratories, Inc.

PC GLASS BLOCKS

Listed by

Underwriters' Laboratories, Inc.

NOTE: For information regarding details of chase construction required, consult the Pittsburgh Corning Corporation, 632 Duquesne Way, Pittsburgh, Pa., or your nearest branch of the Pittsburgh Plate Glass Company.

PC GLASS BLOCKS APPROVED  
BY BUILDING CODE AUTHORITIES

Building Code Authorities throughout the country have accepted and approved the use of PC Glass Blocks as a building material of adequate strength for non-load-bearing construction when installed according to the manufacturer's directions.



# PC Glass Blocks—CLOSED SPECIFICATIONS

**GENERAL CONDITIONS:** The "General Conditions" of the contract are a part of these specifications.

**SCOPE OF THE WORK:** This contractor shall furnish all labor and materials to install all glass blocks where shown on the drawings or specified hereinunder. This shall include the furnishing and installation of all expansion joint strips, oakum packing, wall ties, wall anchors, calking, asphalt emulsion, and other labor and materials necessary for a complete installation. This contract does not include the preparation of the structure to receive the glass block panels, such as chases, stiffeners, etc., except as hereinafter specified.

**MATERIALS: Glass Blocks . . .** shall be hollow, partially evacuated, clear, colorless glass units as manufactured by the Pittsburgh Corning Corporation. Units shall be "all glass," formed of two halves fused together at a high temperature. Edges shall be so formed as to provide a "Key-lock" Mortar Joint. All blocks shall be coated on the edges with a grit-bearing, water-and-alkaline-resistant plastic material.

**Patterns—Sizes—Shapes . . .** shall be as shown on the drawings or as specified hereinunder:

(Indicate PC patterns, sizes and shapes, and locations)

**Expansion Joint Materials . . .** where shown or required, shall be PC Expansion Strips as furnished by Pittsburgh Corning Corporation.

**Asphalt Emulsion . . .** where shown or required, shall be PC Asphalt Emulsion as furnished by Pittsburgh Corning Corporation.

**Wall Ties . . .** shall be PC Wall Ties of steel double wire mesh formed of two parallel wires (No. 9 gage) 2 in. on centers with electrically welded cross wires (No. 14 gage) at regular intervals, and shall be galvanized. Wall ties shall be installed in horizontal mortar joints of all glass block panels as follows:

For  $5\frac{3}{4}$ " size blocks—Every four courses.

For  $7\frac{3}{4}$ " size blocks—Every three courses.

For  $11\frac{3}{4}$ " size blocks—Every course.

Wall ties shall run continuously with ends lapped not less than 6 in. and shall run from end to end of panel. Wall ties shall not bridge expansion joints.

**Wall Anchors . . .** where shown on drawings shall be PC Wall Anchors as furnished by the Pittsburgh Corning Corporation and shall be No. 20 gauge perforated steel strips 24 in. long by  $1\frac{3}{4}$  in. wide galvanized after perforating. All wall anchors must be crimped within expansion joints, and shall generally be placed in the same joint as wall ties and must be completely embedded in the mortar joint of the glass block panels.

**Mortar . . .** shall be one (1) part Portland cement, one (1) part lime, and four (4) to six (6) parts sand, all measured by dry volumes, and *integral type waterproofer*, mixed to a consistency as stiff as will permit good working and shall be drier than for ordinary clay brickwork. For interior panels, the waterproofer may be omitted. Admixtures in the form of setting accelerators and anti-freeze compounds shall not be used.

NOTE: At the discretion of the architect or engineer, a mortar prepared from masonry cement of low volume change, incorporating metallic stearate type waterproofer, and mixed in accordance with manufacturer's recommendation may be specified as an alternate.

**Cement . . .** shall be Type I conforming to the Standard

Specifications for Portland cement (A.S.T.M. Designation: C150-44).

**Lime . . .** shall be a high-calcium type\* hydrated lime or masons' hydrate conforming to the Standard Specifications for Hydrated Lime for Structural Purposes (A.S.T.M. Designation: C6-44); or a well-slaked quicklime putty conforming to the Standard Specifications for quicklime for Structural Purposes (A.S.T.M. Designation: C5-26). Hydrated lime shall be soaked at least two (2) hours, and quicklime shall be slaked not less than forty-eight (48) hours and screened prior to use in mortar. Where lime in the form of putty is used, the amount specified shall be interpreted as the actual volume of putty.

\*NOTE: Hydrated lime of the magnesia or dolomitic type may be used provided that not less than 92% of all active ingredients are completely hydrated.

**Sand . . .** shall conform with Standard Specifications for Aggregate for Masonry Mortar, Intermediate Grading (A.S.T.M. C144-44), but shall contain particles of such size that not more than twelve (12) per cent by weight shall pass a No. 100 mesh sieve, and one hundred (100) per cent shall pass through a No. 8 mesh sieve as defined therein.

**Waterproofer . . .** shall be Pittsburgh Plate Glass Co. type NV-3389 (metallic stearate type). It shall be added to the mortar at the time of mixing and in the proportion recommended by the manufacturer, except where a waterproof Portland cement or prepared masonry mortar is used. In the latter cases, no waterproofer shall be added at the time of mixing.

**Oakum . . .** where indicated on drawings or required for lateral cushioning of glass block panels at jambs and head chases, shall be of non-staining type treated to prevent dry rot, and shall be subject to the approval of the architect or engineer.

**Calking . . .** mastic calking compounds as approved by the architect shall be applied evenly and to the full depth of recess provided at both interior and exterior perimeters of all glass block panels.

**FLASHINGS:** Unless otherwise specified, contractor shall furnish and install in locations shown or where required, flashings as are necessary to provide a complete installation.

**INSTALLATION:** Sills shall be heavily coated with asphalt emulsion which shall be allowed to dry for at least two hours before mortar is placed. Expansion joint strips shall be adhered to the jambs and head with asphalt emulsion, and shall run continuously in the expansion space, and must rest directly on the sill.

All mortar joints must be completely filled with mortar and *shall not be furrowed*. Mortar must not bridge across expansion joints. Blocks shall be laid up plumb, true to line, and with one-quarter ( $\frac{1}{4}$ ) in.\* visible width mortar joints. While mortar is still plastic and before final set, the joints shall be compressed to a depth necessary to expose the corners of the blocks as sharp, clean lines, and joints shall immediately be tooled slightly concave and smooth. The number of courses of glass blocks laid in successive lifts shall be limited to prevent compaction of joints.

\* Unless otherwise specified.

**CLEANING:** While mortar is still plastic and before final set, this contractor shall clean off all mortar and foreign material from the glass block surfaces. Final cleaning shall be done by others, after mortar has reached its final set.





# PITTSBURGH CORNING GLASS BLOCKS

MANUFACTURED BY

**PITTSBURGH CORNING CORPORATION**

632 DUQUESNE WAY

PITTSBURGH 22, PA.

AVAILABLE IN THE FOLLOWING CITIES THROUGH

## PITTSBURGH PLATE GLASS COMPANY

AKRON 4, OHIO	DUBUQUE, IOWA	LYNCHBURG, VA.	ROCHESTER 8, N. Y.
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	SAN BERNARDINO, CALIF.	MISSOULA, MONT.	



# SE PC LX-75 GLASS BLOCKS

for better *DIFFUSION* of daylight



A.I.A. FILE NO. 10-F

PITTSBURGH CORNING CORPORATION

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PITTSBURGH

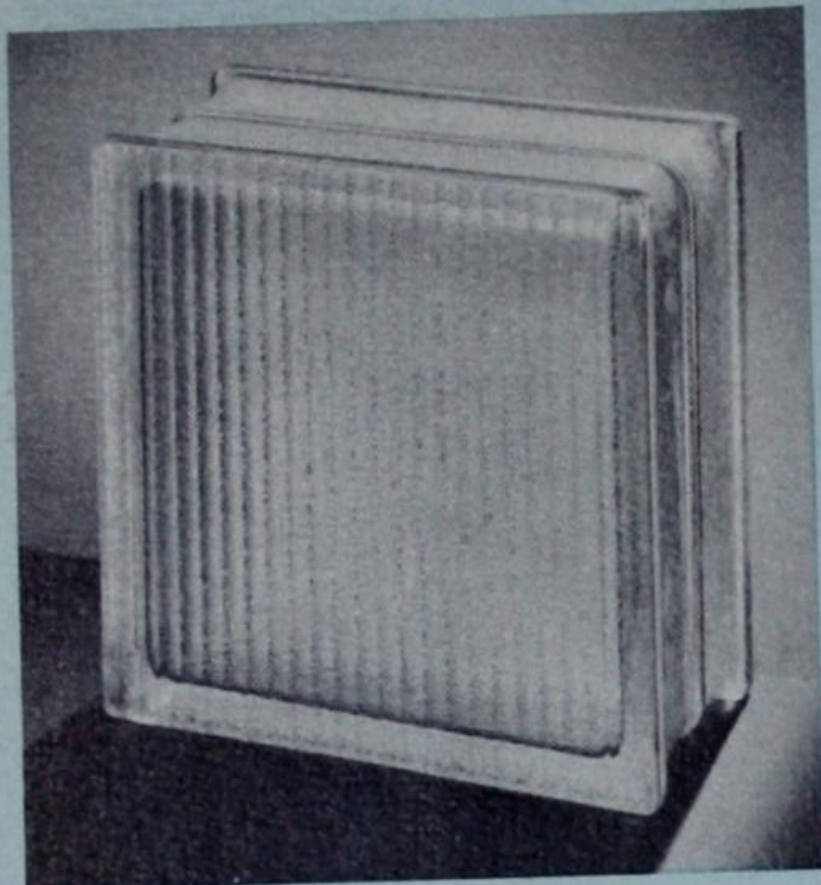
PC

CORNING



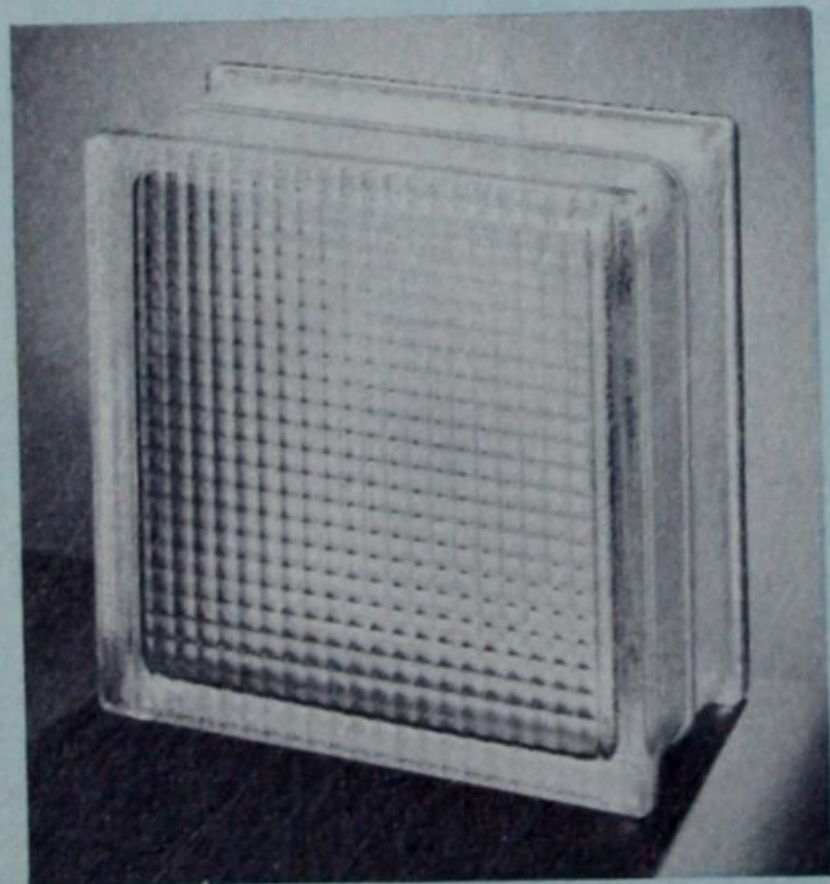
# How LX-75 GLASS BLOCKS

## Compare with Standard Patterns



BRISTOL LX-75 (with a fibrous glass screen)

1. Specially designed for use on sun exposures to provide softer, more diffused light, with greatest reduction in brightness, and to reduce solar heat transmission. 2. A fibrous glass screen insert in combination with face pattern of block produces maximum light diffusion and obscurity, while sacrificing some light transmission. 3. Should be laid with exterior flutes vertical. 4. Cleanability is maintained by the smooth exterior flutes and lightly etched border. 5. Pattern description: Narrow vertical flutes and lightly etched border on both outside faces, flat etched inside faces, and a fibrous glass screen securely sealed within the block. NOTE: This block is supplied in 7 1/4" square, corner and radial shapes only.



DRUID LX-75 (with a fibrous glass screen)

1. Specially designed to provide a light-diffusing, closely matching unit for use below eye level in panels containing Prism Light-Directing blocks, and at the same time to provide noticeable reduction in brightness and solar heat transmission. 2. A fibrous glass screen insert in combination with face pattern of block produces good light diffusion and obscurity, while sacrificing some light transmission. 3. Must be laid with exterior flutes vertical. 4. Cleanability is maintained by the smooth exterior flutes and lightly etched border. 5. Pattern description: Narrow vertical flutes and lightly etched border on both outside faces, horizontal flutes on both inside faces, and fibrous glass screen securely sealed within the block. Closely matches appearance of Prism Light-Directing block. NOTE: This block is supplied in 7 1/4" square, corner and radial shapes only.

Panels of PC LX-75 Glass Blocks have the general properties of standard glass blocks, plus additional advantages which are traceable to the fibrous glass screen.

**THERMAL INSULATION.** Improved insulation value over standard patterns is obtained. Based on 15 m.p.h. wind velocity outside, "U" is 0.45 compared with 0.49 for standard patterns. However, in computing heat losses through panels for design purposes, it is recommended that a "U" value of 0.49 be used for all block sizes and face patterns.

**SURFACE CONDENSATION.** Improved thermal insulation minimizes the occurrence of condensation on the warm, room side of the blocks, even at higher temperature and humidity levels.

**LIGHT TRANSMISSION.** As compared with standard patterns which transmit 80% of the total incident light, LX-75 blocks in the Bristol pattern transmit 55% and in the Druid pattern 60%.

**SOLAR HEAT GAIN.** Reduced radiation due to the fibrous glass screen results in total heat gain only 60% of that allowed by conventional glass blocks of the same pattern, or only 35% of that allowed by single-glazed sash.

**MAINTENANCE AND CLEANING.** Since the outer surfaces are similar to standard patterns, PC LX-75 Glass Blocks are just as easily cleaned as all other glass blocks. The special features which cause better light diffusion and thermal insulation are all sealed inside the blocks. PC LX-75 Glass Blocks rarely if ever need repairs or replacement.

**PRIVACY.** Like the regular blocks, PC LX-75 Glass Blocks are translucent, not transparent. Privacy is improved, since the fibrous glass screen completely diffuses light, and shadow effects are materially reduced.

**APPEARANCE.** PC LX-75 blocks make attractive panels. The screen leaves the pattern of the block visible, but not sharply defined. This gives the entire panel a soft, pleasing tone.

**GENERAL.** For all practical purposes, PC LX-75 Glass Blocks can be considered identical with conventional blocks of equal size in respect to sound insulation, crushing strength, bond strength, wind resistance, water tightness and weather resistance. Since the diffusing screen is entirely sealed inside the block, it cannot be affected by weather in any way.

For further information or any technical data you may need, write to Pittsburgh Corning Corporation, 632 Duquesne Way, Pittsburgh 22, Pa. Also makers of PC Foamglas Insulation.

Manufactured by  
**PITTSBURGH CORNING CORPORATION**  
Distributed by  
**PITTSBURGH PLATE GLASS COMPANY**  
by W. P. Fuller & Co. on the Pacific Coast  
and by Hobbs Glass Ltd. in Canada







